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FACTORS INFLUENCING CAREER DEVELOPMENT OF CANADIAN MILITARY NURSES

BY

MICHELINE M. A. FORTIN ©

A thesis submitted to the Faculty of Graduate Studies and Research in partial fulfillment of the requirements for the degree of MASTER OF NURSING.

DEPARTMENT OF NURSING

Edmonton, Alberta

FALL 1994

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from my doctoral dissertation "Career Patterns and Orientations of Nurses" for your Masters study.

You may make adjustments to the questionnaire wording to make it applicable to the military context.

All the best with your research. I look forward to the outcome.

Yours sincerely,

Mary Ann McLees

Dr Mary Ann McLees
Associate Dean

Bundaberg Campus
PO Box 1724
Bundaberg
Queensland 4670
Tel (071) 53 1959
Fax (071) 53 1435

Emerald Campus
PO Box 197
Emerald
Queensland 4720
Tel (079) 82 2904
Fax (079) 82 2758

Gladstone Campus
PO Box 1319
Gladstone
Queensland 4680
Tel (079) 72 3729
Fax (079) 72 4252

Mackay Campus
PO Box 5666
Mackay Mail Centre
Queensland 4741
Tel (079) 40 7577
Fax (079) 40 7607

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Yours sincerely,

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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled FACTORS INFLUENCING CAREER DEVELOPMENT OF CANADIAN MILITARY NURSES submitted by MICHELINE M. A. FORTIN in partial fulfillment of the requirements for the degree of MASTER OF NURSING.

Judith Hibberd

Dr. J. M. Hibberd (Supervisor)

Louise Jensen

Dr. L. A. Jensen

R. G. McIntosh

Dr. R. G. McIntosh

Date: September 23, 1994

This thesis is dedicated to my husband Tim

for his love, encouragement, and for

consistently supporting me as I tried.

This thesis is dedicated to my husband Tim

for his love, encouragement, and for

consistently supporting me as I tried.

ABSTRACT

The Canadian military nursing workforce has never been investigated before and no demographic data have ever been published. The objective of this study was to explore the factors influencing the career development of military nurses in the Canadian Forces (CF). The survey instrument Career Orientation of Nurses Questionnaire, previously developed by McLees (1988) and revised by the researcher to be more applicable to the military system, was used to collect data. It was distributed to the entire population of Nursing Officers of whom 30 participated in the pilot study and 330 received the final instrument. Two hundred and forty-three military nurses completed the questionnaire (73.6%).

The questionnaire consisted of two parts: Career History and Career Orientations Inventory. The first part of the questionnaire collected information about the education, professional / community activities, work history, and demographic information of the population. The second part was designed to identify the career orientations of military nurses.

Career history data revealed that of the five possible career patterns identified in the literature, the predominant career pattern of Nursing Officers was mobile advancing. Factor analysis identified eight career orientations characteristic of Nursing Officers: ambition for leadership, family commitment, autonomy, self-esteem, technical competence, variety/adventure, job security, and professional integrity. None of the eight career orientations identified were dominant.

The examination of career pattern, adult life cycle, and rank level showed differences across the rank groupings of these military nurses. Results suggest that only those military nurses with a mobile advancing career pattern would achieve a superior rank in the CF. In spite of a higher proportion of male Nursing Officers (16%) in the Canadian Forces compared to non-military nurses in general, gender differences in career development was not significant for any of the career orientation factors.

The main implication of the study is that there is now base line data on the Canadian military nursing workforce available as a starting point for future research and policy decision making.

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CHAPTER I

Introduction

The Nursing Services of the Canadian Forces provide military nurses a spectrum of work experiences and training opportunities. However, the career development of a Nursing Officer is virtually unknown among Canadian nurses. Except for a few historical accounts of Nursing Sisters during active war time (Nicholson, 1975), there is almost no literature published on the factors influencing the decisions of nurses who develop a career as Nursing Officers (NOs). In February 1994, the Canadian Forces (CF) Nursing Services consisted of 360 NOs representing 0.14% of the total Canadian nursing workforce (Statistics Canada, 1991). This unique nursing population is an interesting section of the nursing workforce and, therefore, information on career development of military nurses could contribute to the knowledge and management of this professional human resource.

Nicholson (1975) wrote that for 13 of the 14 professional nurses who joined Miss Florence Nightingale's "brigade of nurses" (c1854) during the Crimean War, the "only inducement for going was the pay . . . with board, lodging, and uniform" (p.8). Although pay, lodging, and uniform remains important in the 1990s, it is generally understood that there are other factors associated with nursing career development. Morrison and Zebelman (1982) asserted that through the study of the career concept in nursing, a better understanding of employees' aspirations, expectations, commitments within the organization, and needs and values could be learned.

The decision to enroll in the CF as a Nursing Officer (NO) is voluntary, but subsequent employment in any theater of operations is not necessarily voluntary. Military needs override personal preferences and when these needs affect an individual's willingness to fulfill a military obligation, then the person must make decisions that have significant impact on his/her lifestyle and career (Jans, 1989). Like civilian nurses, Canadian military nurses have the same basic nursing educational qualifications, either a nursing diploma or a baccalaureate in nursing. However, the career of a military nurse is identifiably different from a civilian nurse, and once a nurse joins the military, factors unique to the military's operational requirements influence career development. Some

obvious factors are the highly structured environment with limited freedom, military discipline, and career progression that must conform to a predominantly male organization. The CF is principally a male-dominated organization where 88% of the workforce is male. In contrast, the nursing branch is 84% female and 16% male.

Military nursing employment encompasses a broad range of applications from clinical, educational, and managerial nursing practice to some military specialty fields of practice. These include national and international aeromedevac (flight nursing) to peacekeeping operations with the United Nations. It also involves employment in and out of the nursing profession, many job rotations, and frequent geographical relocations. Unlike civilian nursing, the military offers substantial supervisory roles with authority early in the career. There are opportunities for advancement, promotion, professional growth, and possible retirement with a military pension after only 20 years of service (Kocher & Thomas, 1994), but do these military characteristics serve as incentives and reinforcements during a military nursing career?

Purpose of the Study

The Canadian military nursing workforce has never been investigated before and no published demographic data are known to the nursing profession. Therefore, the objective of this study was to explore the factors influencing the career development of military nurses in the Canadian Forces.

The overall question asked in this study was What are the factors influencing the career development of military nurses in the Canadian Forces? Specifically, the research questions guiding the study were:

1. What are the career history characteristics influencing the career development of Canadian military nurses?
2. What are the career orientations of Canadian military nurses?
3. What is the relationship between career history characteristics and career orientation among Canadian military nurses?
4. What is the predominant career pattern of Canadian military nurses?
5. What is the relationship between career history characteristics and adult life cycle in the career development of Canadian military nurses?

Significance of the Study

In this study, factors influencing the career development of military nurses in the Canadian Forces were explored. Because this is the first study of CF nursing personnel, a summary of population characteristics is provided, thus establishing base line data for future research of the CF nursing workforce. Information obtained may assist in recruiting nurses and generating interest in the type of employment offered by the CF. Also, the information could be used by the Personnel Career Officer Nurse, or by any military nursing manager, for human resource development purposes and career counselling. Furthermore, insights may be offered about the nature of career development to any military nurse currently serving in the CF and to new recruits. Finally, the results of this study may generate constructive discussion within the CF on the future of Nursing Services in the military.

CHAPTER II

Literature Review

Overview of the Canadian Forces

Nursing Career Development

"Military nursing is the oldest field of active military service open to women" (Nicholson, 1975, p. 4), but the domain of military nursing practice is still relatively unexplored. There are only two known papers written on military nurses in Canada: an "in-house" report conducted in 1990 by the Canadian Forces (CF) on the occupation analysis of Nursing Officers (NOs), and a historical review of Canada's Nursing Sisters by Nicholson (1975). In Canada, the earliest record of nurses recruited by the military was the invitation for lady volunteers to form a "corps of nurses" for deployment in two field hospitals in the North-West Campaign of 1885. Soon after, in 1899, the Canadian Army Nursing Service was created, coincidental with the outbreak of the South African Boer War. Slowly the number of Nursing Sisters enrolled in the Canadian Army Nursing Service increased until the first World War (WWI).

At the beginning of WWI, Canadian Nursing Sisters held military rank and were under military control, a contrast to the armies of other nations. For example, on November 4, 1914, Matron Margaret Macdonald was "the first woman in the British Empire to be granted the relative rank of major" (Nicholson, 1975, p. 55). By the end of WWI, according to Nicholson, there were 3,141 nursing sisters wearing the badge of the Canadian Army Medical Corps.

During the Second World War (WWII), the Royal Canadian Air Force Nursing Service was raised in 1940, and the Nursing Service Branch of the Royal Canadian Naval Medical Corps was formed in 1941. When WWII ended, 4,480 nursing sisters had staffed more than 100 major hospitals and provided care to more than 60,000 Canadian wounded soldiers as well as casualties from nearly every other allied nation. In Korea, from 1951 to 1954, nursing sisters from different branches of the Armed Services were part of the United Nations Operations (Nicholson, 1975). Since 1959, the Canadian Forces Medical Service has been the integrated branch of each of the three medical corps and the three nursing services. The Canadian Forces Medical Service is commanded by

the Surgeon General. Currently, Nursing Officers continue to provide nursing care to all CF members and where authorized to their families.

In the 1990s, a person who wishes to become a Nursing Officer (NO) has the choice of three entry schemes. The first scheme, the Direct Entry Officer (DEO) program, is for registered nurses with a nursing diploma or a baccalaureate in nursing. The enrollee joins the CF directly as a commissioned officer. The second scheme, the Regular Officer Training Plan - Nurse (ROTP), is for the individual who wants to become a Nursing Officer and through selection is subsidized for a basic nursing program at any Canadian university. Lastly, the University Training Plan-Non Commissioned Member (UTPNCM), is designed for a serving CF Non-Commissioned member who applies and is chosen by competition to be subsidized for a baccalaureate nursing program at any Canadian university. The member who joins the CF through ROTP or UTPNCM must fulfill an obligatory period of service up to a maximum of four years after completion of the basic nursing program.

On registration as a nurse in any of the ten Canadian provinces, the new member is commissioned and receives a rank applicable to the terms of enrolment (usually Lieutenant). S/he is essentially employable as a nurse but is not regarded by the CF as being fully qualified for military nursing purposes. All new nurses must complete the Basic Officer Training Course and the Basic Nursing Officer Course (BNOC). Once occupationally qualified, no further nursing training is required. However, subsequent Canadian Forces leadership, management, and specialty training courses are available and contribute to the progress of the career.

Theoretically, without any further military occupational training (after the BNOC), NOs can progress in their careers to the top rank of the occupation. Nursing Officers have the opportunity to receive additional professional development training by requesting attendance at any of the occupational specialty courses presented in Appendix A.

Career progression is gauged by the nurse meeting the requirements of a career model that includes a hierarchy of positions, displayed in Appendix B. The career model is based on the nurse advancing through progressive ranks, by merit, after serving a

minimum time in the previous rank. The nurse must consistently demonstrate skill, knowledge, performance, and potential to be promoted. The nurse is evaluated annually by his/her immediate supervisor with an assessment tool called Performance Evaluation Report (PER). The merit list for promotion results from an impartial panel reviewing the Nurses PERs annually. The present CF rank structure for a Nursing Officer is Lieutenant (Lt.), Captain (Capt.), Major (Maj.), Lieutenant Colonel (LCol.), and Colonel (Col.).

Only the Nursing Officers who have obligatory service due to a professional/ academic education program have a fixed obligation to stay in the CF. All other NOs serve under different Officer Career Development Plan (Appendix C). Initially an individual who is enrolled under ROTP is obliged to accept a Short Service Engagement (SSE). The SSE contract is over after the enrollee is commissioned and the Short Engagement or SE begins. The SE period covers nine years of commissioned service. During this period, the NO is likely promoted from Lieutenant to Captain and in exceptional cases to Major. During the 6th, 7th, or 8th year of service, the individual is offered a conversion plan from the SE plan to an Indefinite Engagement (IE) plan. The IE period consists of 20 years from the time the individual was enrolled in the CF. When a NO is in the IE period, there is a strong incentive to stay in the CF until eligibility for retirement at 20 years of service. During the 17th, 18th, or 19th year of service, the individual may be offered an extension to an Indefinite Period of Service (IPS) until age 55. At any time the NO can request to be released if s/he is not under any obligatory period of service. The Pension Plan annuity is defined according to the number of years served after 20 years.

Although there is a perception that military needs dictate a lock step type of career structure, in reality there are many choices that can influence the career development of military nurses. Nursing Officers in the CF can make decisions that result in various career profiles and affect the development of their careers.

The remainder of this chapter contains a review of relevant theory and research in the area of career development. The concept of career, career choices, adult life cycle, career anchors/orientations, and career mobility are examined.

Overview of the Literature

Definition of Career

Since the turn of the 20th century, researchers have developed theories of work and career from a prescriptive model of matching the individual with the job. They have focused on constructing stage models of career choice and career development (Ginzberg, Ginsburg, Axelrad, & Herma, 1951; Super, 1957) to explain the specifics of career choice and adjustment (Holland, 1973; Krumboltz, 1979; Roe, 1957). Consequently, the word career was assigned many different meanings over time, with each meaning emphasizing key elements of the researcher's field.

Super (1957) considered the word career to represent "the sequence of occupations in the life of an individual or of a group of individuals" (p. 71). For Hall (1976), career is "the individually perceived sequence of attitudes and behaviors associated with the work-related experiences and activities over the span of the person's life" (p. 4). Van Maanen (1977) defined career as a "series of separate but related experiences and adventures through which a person passes during a lifetime" (p. 1). In the context of psychological and sociological fields, Schein (1980b) defined career more specifically as the "expected sequence of roles that defines progress in an occupation" (p. 358). More recently, Gutek and Larwood (1987), in their research on careers for women, stated that "The notion of career development implies that the series of jobs represents some progress--for example, up in the hierarchy, an increasingly large salary . . . The more one's career progresses in these ways, the more it is judged successful" (p. 9).

Consistent with the definition of career, Vestal (1983) contrasted job and career for nurses by saying, "While a 'job' can be construed to consist of a number of assigned tasks that result in meeting a specific role expectation, the term career implies upward mobility through a succession of positions requiring increasing levels of skills, expertise, and knowledge" (p. 189). Because nursing is characterized by a multitude of job options in a variety of settings, the notion that nurses might actually plan their careers has, surprisingly, not received much attention among researchers. Accepting the notion that some nurses consciously develop a career while others choose not to leads to the

conclusion that nurses must, at some point, decide whether they want a little more than a series of jobs or want to visualize and develop a career (Buscherhof & Seymour, 1990).

Limited research emphasis has been placed on the career in nursing because nursing research has concentrated, primarily, on the elements of the job. Traditional nursing management theories tend to focus on work environment attitudes such as job satisfaction or commitment, (Aponte, 1985; Blegen, 1993; Blegen & Mueller, 1987; Kirsch, 1990; McCloskey, 1974; Mottaz, 1988; Mueller & McCloskey, 1990; Seymour & Buscherhof, 1991; Robinson, Rodriguez, Sammons, & Keim, 1993). Only a few researchers (Gibson & Dewhirst, 1986; Kaye, 1982a; Kleinknecht & Hefferin, 1982; Larsen, 1986; Malik, 1991; Ytterberg, 1993) have examined career path or career development for nurses in their research. McLees (1988), who studied the career patterns and orientations of Canadian nurses, defined career as a series of work and family experiences and adventures that a person passes through during a lifetime. It involves notions of success and status that realize personal needs, individuals' aspirations, and societal expectations.

The concept of career, therefore, includes the common theme of a continuous process over a lifespan, in which attitudes and behaviors influence decisions that impact on career progression. By assessing retrospective attitudes and behaviors of military nurses currently serving in the CF, through the sequence of their work experience, it may be possible to study the influence(s) of specific factors on career choice(s).

Career Choice

Two diametric theories, content versus process, have been used to explain career choice. Content theories contend that one's formative environment (Roe, 1957) or personality type (Holland, 1973; 1985) results in individual characteristics and attributes which predetermines an individual's potential career choice(s). Process theories of career choice focus on the ways in which career choices are made. Following Ginzberg et al., (1951), Tiedeman and O'Hara (1963) formulated a process theory that described the manner by which individuals gradually arrive at an occupational choice and then make decisions to implement that choice. Krumboltz (1979) developed a theory that incorporates both the content and the process aspect of career choice. He identified

factors that influence the nature of career decision-making. These influencers include genetic endowments, environmental conditions and events, and learning experiences. For example, a ninth grade girl assigned to read Florence Nightingale's biography would subsequently express greater interest in nursing than those designated to read Moby Dick. A process theory approach is appropriate for the nurse who joins a military system, because there are a number of complex choices and decisions to make and each choice influences future career development.

As most of the research has been conducted with male subjects, there is sparse information about the career choices of women. However, Gutek and Larwood (1987) showed that women choose occupations that are socially acceptable for women. Lent and Hackett (1987) stated that women are likely to choose a career where they can be successful. In nursing, Kersten, Bakewell, and Meyer (1991), McLees (1988), and Stevens and Walker (1993) have used predominantly female samples in their studies and arrived at a similar conclusion for the reasons why women choose nursing as a career. These reasons include nurturance, emotional needs, employment opportunities, financial benefits, and interest in science. Gender differences are not found to be significant because men who choose nursing as a career report similar reasons in their responses (Galbraith, 1991; Okrainec, 1986, 1989; Taylor, Dwiggins, Albert, & Dearness, 1983).

Others important factors that influence the choice of nursing as a career are related to the organization. The organization in which nurses practice their profession impacts significantly on a career (Hall, 1976; Schein, 1978). Organizational factors include the organizational purpose, job opportunities, supervision, performance assessment, career planning, career development activities, and staffing support systems. Cotton (1979) found that the organizational factors for military personnel upon joining the Canadian Forces consisted mainly of two kinds. The first category deals with the occupation, work, and pay motives, and the second category with social motives such as serving the country, travelling, experiencing adventure, group life/comradeship, and becoming more independent.

The choice of a military nursing career by an individual therefore appears to be affected by the "social structures of time" (Ytterberg, 1993, p. 19). Since the new age

of enlightenment, gender barriers to entering nursing and the military system have been greatly reduced. Whether or not people choose a military career may have more to do with such phenomena as phases of the adult life cycle.

Adult Life Cycle

The adult life cycle refers to the stages that people experience in life and when pursuing a career (Levinson, 1986; Levinson, Darrow, Klein, Levinson, & McKee, 1978; Super, 1986). The imagery of cycle suggests that there is an underlying order in human life; however, not everyone will experience the adult life cycle precisely, simultaneously, or with the same events, but everyone goes through the same basic sequence (Levinson, 1986). Roberts (1992) and Roberts and Coleman (1992) used the works cited above to delineate the life cycle into three main groupings shown in Figure 1.

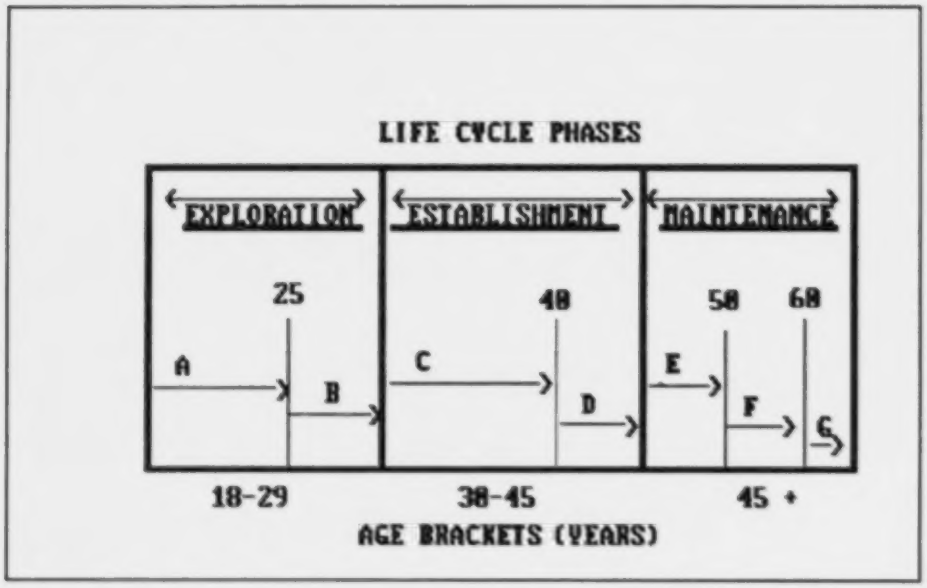

Figure 1. **Life Cycle Age Group Brackets** *

*Note. From A study of exit, voice, loyalty, and neglect as behaviors in the work place (p. 19) by J. T. Roberts, 1992, Unpublished Master's Thesis, University of New Brunswick, Fredericton. Reprinted by permission.

Exploration period. In the exploration period, between the age of 16-25 years marked (A) in Figure 1, individuals usually leave school, start a first job, begin to develop career expectations, and make the transition to Adult Life (Super, 1986). Between the mid-20s and early 30s, marked (B), the transition phase occurs, where people establish an occupational structure involving personal and work-related commitments, marriage, house buying, community involvement, and leisure activities (Super, 1986). In this period, people generally decide upon and formulate their career/life "dream" (Levinson et al., 1978). Fulfilling the dream becomes the goal, the focus of their efforts, actions, and behavior decisions. With women, work may be a central component with family absent or secondary; alternatively, marriage and family may be the primary interest (Roberts & Newton, 1987).

Establishment period. In this phase, between the ages of 30-40 years, marked (C) in Figure 1, individuals tend to reach their career peak, develop a high level of competence at work, achieve greater authority, independence, and self-sufficiency (Super, 1986). However, as the rewards of living in this era are enormous, the costs may often equal or even exceed the benefits (Levinson, 1986). Depending on how well the desired goals (dreams) are achieved, the post peak career period, between ages 40-45, marked (D), is known as the mid-life transition phase. In this period, people evaluate and decide whether to continue to seek their dream or to accept realistic career expectations and settle into an introspective state oriented to enjoy life and have career satisfaction (Levinson, 1986; Levinson et al., 1978; Super, 1986). For women, this phase may show a discernible change in the pattern of commitment to career and family, possibly coupled with an increased desire for personal expression in work and family life (Roberts & Newton, 1987).

Maintenance period. At the beginning of the maintenance period, between the ages of 45-50 years, marked (E) in Figure 1, innovation or stagnation is the expected norm of career development. Individuals may again try to make changes to enrich their lives within their limitations (Levinson, 1986; Super, 1986). Between the ages of 50-60 years, marked (F), the career begins to decelerate. Early retirement and general separation from the organization is expected. With the "early retiree," actual moves to

another job or occupation are often frequent (Super, 1986). Normally from age 60 years and older, marked (G), there is continued disengagement from the career and complete retirement commences (Super, 1986).

While adult life cycle models have generally focused on men, it appears that life cycle studies with women reveal similar patterns, but there are periods of career suspension for childbirth or child rearing (Roberts & Newton, 1987). Because nurses are professionals, with women in the majority, there might be a significant gender effect that can be found by the influence of the adult life cycle on a career. As nurses progress through their careers and the adult life cycle, the career choice process is likely to be influenced by different factors at different times. The work of Schein (1978) suggests a model of career development in which individuals foresee their career development and engage in actions that will affect the achievement of the career vision. Schein calls these different orientations of individuals *career anchors*.

Career Anchors

Schein (1978) defines career anchors as "the pattern of self-perceived talents, motives, and values [which] - serves to guide, constrain, stabilize and integrate the person's career" (p. 127). Schein's metaphor of anchor represents personal perceptions formed because of early interactions with the work environment. "Anchor" experiences are used in situations such as when the individual perceives the possibility of failure or situations of difficult choices concerning personal values. The anchor pulls the person back to a point of congruency.

To Schein (1980b), career development has two components, an external and internal. The external career consists of "actual sequences of positions that are defined within occupations or organizations" (p. 358). The internal career is the subjective meaning that individuals connect to critical events in their lives. Schein suggests that an important research issue to pursue is "to correlate transitions in the external career with the perceptions and feelings that occur in the internal career" (p. 358).

Schein's longitudinal study (1977) of 44 male alumni from the Massachusetts Institute of Technology's Sloan School of Management resulted in the identification of five career anchors:

1. **Management competence**: The entire career is organized around climbing an organizational ladder to achieve a position of responsibility and leadership.

2. **Technical/functional competence**: The entire career is organized around a particular set of technical or functional skills that the person is good at and values.

3. **Security**: The entire career is organized around the location of an organizational niche that guarantees continued employment and financial independence.

4. **Creativity**: The entire career is organized around some kind of entrepreneurial effort to create a new service/product, to invent something, or to build a business.

5. **Autonomy and independence**: The entire career is organized around finding an occupation that allows people to decide their own hours, lifestyles, and working patterns.

Derr (1980, 1982) used Schein's (1977) notion of career anchors in a longitudinal exploratory study of 154 male American naval officers over a three year period. Derr suggested that the most common career anchors for this sample were managerial, security, and technical competence that varied according to the type of work of the respondents. Autonomy and creativity anchors were not strongly identified and may be related to the organizational culture of the military. However, two career anchors surfaced during Derr's interviews: (a) **identity/affiliation** or the need to feel part of the group or the extended family; and (b) **warrior or adventurer**, when a person is "attracted to high adventure, lots of action and risk" (1980, p. 186). Perhaps the warrior/adventurer career anchor may also apply to the organizational culture of the military.

Paralleling Derr (1980, 1982), DeLong (1982) used the five career anchors from Schein's (1977) work in a retrospective survey of 600 male industrial administration graduates. He identified three strong career anchors: managerial, autonomy, and creativity. Three other career anchors also appeared: (a) **service**, when a person uses his interpersonal and helping skills in the service of others; (b) **identity**, when an individual is guided throughout his career by the status and prestige of belonging to a certain organization; (c) **variety**, when a person wants several different types of

challenges and assignments. However, DeLong noted that the questionnaire used in the study was "an inadequate measure of the complex constructs under investigation" (p. 60). The above-mentioned studies on career anchors were all conducted with men and are summarized in Appendix D. However, there are a few publications focusing on women in nursing that are relevant to this study.

Career Anchors in Nursing

In her qualitative research, Aune (1983) interviewed 40 professional nurses using Derr's (1980, 1982) research as the theoretical basis. She attempted to determine if nurses have identifiable career anchors and to decide if the career anchors were relevant to the practical areas of nursing. The results suggested that nurses did have career anchors and some anchors were more dominant than others, but no anchor was characteristic of a particular functional group.

Aune (1983) identified the anchor of **service**, including the values of caring, compassion, altruism, the motive of contributing to the well-being of others, and the skills of interpersonal communication and empathy. Aune also found that the type of basic nursing education program had an influence on career orientations and subsequent career commitment. She recognized the limitations posed by the wide age range (25-63 years) and experience of her sample, suggesting that a more congruent group would provide a more consistent picture of the career anchors of nurses.

McLees' (1988) developmental descriptive study was a survey of 202 Canadian registered nurses who had a minimum of 10 years of experience. She used the findings of Schein (1978), DeLong (1982), and Aune (1983) to develop a questionnaire to look at the factors that influence the choices made by individuals who choose to pursue a nursing career. Her factor analysis revealed eight career orientations (anchors) of graduate nurses: (a) ambition for leadership, (b) altruism, (c) job security, (d) family commitment, (e) independence, (f) variety/adventure, (g) self-esteem, and (h) professional integrity. During her research, McLees used the terms career anchors and career orientations interchangeably.

In McLees' (1988) study, clusters of anchors were identified. Ambition for leadership, variety/adventure, and self-esteem formed the first cluster. Family

commitment, altruism, and independence formed the second cluster; and finally, job security and professional integrity formed the third cluster. While the nurses appeared to have definite career anchors that formed related clusters, none of the career anchors or clusters were particularly dominant. McLees was not able to confirm if the values, motives, and talents tended to "guide, constrain, stabilize, and integrate the person's career" (Schein, 1978, p. 127). However, her study showed that values, motives, family commitments, and talents act as constraints on career development. She stated that her questionnaire was useful as an assessment tool but it was inadequate to reveal the extent of the influence that the anchors had on the career.

In her exploratory study, Jackle (1993) examined the driving and restraining forces that influenced the career decision(s) of 153 registered nurses who chose to become contingent employees. For her study, Jackle Belous' (1989) definition of the term contingent employee: "employee holding temporary assignments in a company with no claim to benefits or stable employment" (Jackle, 1993, p. 56). Jackle's research revealed that from all the career anchors that affected career choice, altruism ranked first, followed by independence. Ambition for leadership was last. It appears that age and family phase may also determine which career anchor is the most influential on career decision(s).

From the pioneering work of Schein (1977) and the research of Aune (1983), McLees (1988), and Jackle (1993), it appears that nursing is more than a series of jobs. These researchers suggest that nurses have definite career anchors that greatly influence their career choices and development. They advocate further development of the career concept and career anchors to increase the understanding of the effect of career anchors for nurses in different work environments. There is also the indication that personal factors such as professional development and family phase may have an influence on a nurse's career choice(s). Appendix E provides a summary of career anchors/orientations studies in nursing.

Career Mobility

Adult life cycle and career anchors are useful concepts for understanding career development. However, career mobility is also another important element affecting the

development of an individual's career. Career mobility refers to an individual's change of jobs over time within a specific job sequence. Mobility can be either vertical or horizontal and is based on prestige and pay (Dabrowski, 1983; Gattiker & Larwood, 1988). Buscherhof and Seymour (1990) explained that extrinsic rewards traditionally valued in a male dominated profession (i.e., high pay, responsibility, power, prestige, comfortable conditions, good fringe benefits, recognition, and power to direct one's own career and to affect the progress of others) are not considered as important by professional or business women. In a study of 922 nurses, Buscherhof and Seymour found that "nurses do not define success in their work primarily by the achievement of money, power and position . . . but they prize . . . the achievement of a high level of clinical skills, doing a job they enjoy and the feeling that they make a significant contribution to human welfare" (p.86).

McLees (1988) identified five distinct types of employment/ career pattern that are similar to Kaye's career mobility options (1982a, 1982b). These careers patterns are:

1. **Stationary Place-Bound Career** -- is when a nurse has always worked as a staff nurse/team leader in the same agency/hospital.

2. **Mobile Lateral Career** -- is when a nurse has worked in more than one agency/hospital always at the staff nurse/team leader level.

3. **Advancing Place-Bound Career** -- is when a nurse has worked for the same agency/hospital but has been upwardly mobile within the agency.

4. **Mobile Reverting Career** -- is when a nurse has worked in two or more agencies/hospitals at several position levels but at the time of the survey, was working as a staff nurse/team leader.

5. **Mobile Advancing Career** -- is when a nurse has worked in more than one agency/hospital at more than one position level and appears to have advanced up the professional ladder.

The prevalence of a mobile lateral career had been noted previously by Lewin and Olesen (1980). McLees (1988) revealed that 35% of her sample exhibited a mobile lateral career pattern after 10 years in the profession. Lateral paths afforded the nurse the independence to pursue individual and professional goals. A lateral career pattern

fosters a more congenial home/work role balance and removes the competitive struggle for hierarchical promotion (Buscherhof & Seymour, 1990; Lewin & Olesen, 1980). As nursing is a female-dominated profession, the career mobility of nurses is constrained by marriage, children, and work. It is generally acknowledged that the development of a career is more difficult to achieve for women (Roberts & Newton, 1987).

Summary

In summary, concepts relevant to the components of career development have been explored. As demonstrated, most of the research has been conducted with male samples and very few with women and military personnel. However, Aune (1983), McLees (1988) and Jackle (1993) surveyed nursing samples that were predominantly female. In this study, it is important to enhance the knowledge of career development of women, as they constitute 84% of the nursing population. To date, there is no demographic or career data on Canadian military nurses. Therefore, the next logical step in the enhancement of knowledge related to the career of military nurses would be to explore the factors influencing the career development of this unique nursing population.

CHAPTER III

Method

Design

A descriptive survey was used to explore the factors that influence the career development of individuals pursuing a nursing career in the Canadian Forces (CF).

Definitions of Terms

Career is a series of work and family-related experiences and adventures that a person passes through during a lifetime. It involves notions of success and status that realize personal needs, individual aspirations, and societal expectations (McLees, 1988).

Career anchors/career orientations are the result of early interaction between the nurse and the work environment. Career anchors originate from the individual's self-perceived talents, abilities, motives, needs, attitudes, and values. Career anchors function as a set of driving and constraining forces on career decisions and choices (Schein, 1980a).

Career choice is the decision between alternatives in the selection of an occupation and an organization and can occur or recur at any point in adolescence or adult life (Hall, 1976).

Career history refers to an individual's education, work history, professional and community activities, and personal information (McLees, 1988).

Career pattern refers to an individual's change of jobs over time within a specific work sequence (McLees, 1988). In this study, five career patterns were explored: Stationary Place-Bound, Mobile Lateral, Advancing Place-Bound, Mobile Reverting, and Mobile Advancing.

Nursing Officer is a registered nurse who is commissioned by the Canadian Forces and is occupationally qualified after completion of the Basic Nursing Officer Course.

Military occupation is a trade or a profession in the Canadian Forces. It is called an occupation and is designated by number. Fifty-seven (57) is the Military Occupation Category number for the Nursing Officer occupation.

Population

The population for this study was the entire regular component of qualified Nursing Officers (NOs) in the CF. To be eligible to participate in the study, NOs had to have completed the military Basic Nursing Occupation Course (BNOC). The Nursing Officer population consisted of 360 nurses at the following rank levels: 55 Lieutenants, 273 Captains, 28 Majors, 3 Lieutenant-Colonels, and 1 Colonel. No change in the rank distribution was expected over the survey period, thus the rank structure of the population remained constant. A convenience sample of 30 Nursing Officers participated in the pilot study but were not included in the main study. The decision to survey the whole population rather than selecting a sample of NOs was made for the following reasons:

1. Little information has been published on the Canadian military nursing population.

2. The size of the population was not excessive, and the results of the study would therefore provide a comprehensive data base.

3. It would permit a description of the population and yield a record of changing trends for future research (Brink & Wood, 1988).

4. Selection of a sample might have compromised the anonymity of the respondents.

5. Access to all military nurses via the military channels of communication was assured.

In order to differentiate the respondents according to rank level, serving members were categorized into four tiers: (a) Lieutenants and Junior Captains who were not in the promotion eligibility zone for the rank of Major; (b) senior Captains who were in the promotion eligibility zone for Majors, with more than four years in the rank, and (c) Captains with more than twelve years in the rank. The categorization of Captain was made according to the time spent in the military and because at an exact point in his/her career, the member must make the decision to stay or not to stay in the military after being told by the CF of a possibility of extension to a new career plan (Refer to Appendix C). Finally, the superior officers were grouped together, as the fourth tier,

to incorporate all the Majors, Lieutenant-Colonels, and Colonel.

Data Collection

A questionnaire entitled **Career Orientations of Nurses Questionnaire** (Appendix F) was used for data collection. Personal communication with the researcher's military supervisor indicated that the best time of the year to survey the population was between January and May (before and after relocation period). The questionnaire was individually mailed through the military mail system to the participants at their working addresses. All addresses were provided by the Personnel Career Officer-Nurse. A covering letter (Appendix G) and directions for administration, along with a self-addressed stamped envelope, were provided for returning the completed questionnaire to the researcher's military address. Three weeks after sending the questionnaire, a follow-up letter was sent to all participants (Appendix H).

After consultation with the researcher's thesis committee, it was decided not to translate the questionnaire into French (as the francophone Nursing Officers [25%] must be functional in English prior to commencing BNOC) but, as a courtesy, the letter inviting participation and the follow-up letter were written in both official languages. Assurances of anonymity were expected to encourage participation (Polit & Hungler, 1987), and in the case of this population, to minimize response bias due to rank consciousness.

Instrument

The **Career Orientations of Nurses Questionnaire** is a modified version of the instrument designed by McLees (1988). The original title, "Career Determinants of Nurses Questionnaire," was modified at the suggestion of McLees (personal communication, September 19, 1993). As McLees stated, "the term 'determinant' appears to be too decisive and deterministic for the present stage of study" (p. 184). Permission was received from McLees (Appendix I) to revise the questionnaire and make adjustments in wording so that it would be more applicable to the military context. The McLees instrument was based on the concept of career anchors generated by Schein (1978, 1985), DeLong (1982), and Aune (1983).

The questionnaire consists of 90 questions and is divided into two sections. Part

I, Career History, contains of 43 questions on life experiences/achievements. Part II, Career Orientation Inventory, is a 47 item, four point Likert-type scale which contains eight subscales designed to measure career orientations.

Part I: Career History. There are four sections in this part of the instrument: (a) education, (b) professional/community activities, (c) work history, and (d) demographic information.

1. **Education**. This section requested information pertaining to the respondents' age on completion of their basic nursing education program, reasons for entering a nursing program, basic level of nursing education, the highest completed level of education, and any further upgrading education that had been completed. Two questions required information about the reason(s) that prompted the individual to become a nurse.

2. **Professional/community activities**. This section was designed to solicit information about the involvement in and the level of implication for both professional and community organizations.

3. **Work history**. The participant's work history refers to the progression of the individual through a nonmilitary and military nursing career. Questions were asked about the type of organization/agency and area of work prior to joining the CF, age and reason(s) for joining the CF, actual rank, plans to pursue or not to pursue a career in the CF, career pattern prior to and since joining the CF, present position, time in the position, and number of postings. The last question in this section solicited an opinion from the respondents on whether they were, or had been, in an administrative or nursing education position, and if so, whether they considered themselves educators or managers first and nurses second.

4. **Demographic information**. This section was designed to collect data pertaining to year of birth, marital status, age when first married, military or civilian spouse/partner, relocation with or without spouse, number of children, other dependents, career expectations, and opinion on whether gender was a factor in career progression.

At the end of Part 1, the participants were asked to comment on their careers, and to add any other information they would like to share with the researcher. They were thanked for their participation.

Part II: Career Orientation Inventory. Career orientations (anchors) are defined composites of motives, values, needs, and abilities that exist in the individual. These career orientations are said to act as a set of driving and restraining forces on career choices and decisions that individuals make during lives (Schein, 1978). The Career Orientations Inventory, called the Career Determinant Inventory by McLees (1988), is an instrument that was used in a study of 202 Canadian nurses who graduated in 1976 in the province of Alberta. This questionnaire was also used by Jackle (1993) on 153 American nurses who chose to work as contingent employees or agency nurses. The 47 items on the original questionnaire were modified slightly for this study so that it would be more relevant for military respondents. The same four-point Likert scale was used; it ranged from 1 - not important to 4 - very important, and 1 - not true to 4 - very true. The questions were structured and standardized with fixed alternatives so that the responses of participants could be compared. In the instructions for Part II of the Career Orientations of Nurses Questionnaire, the participants were asked to think about careers prior to and since joining the CF, and to think about the factors which influenced decisions about jobs they have taken and career moves they have made.

Part II Career Orientations Inventory contains eight subscales to determine career orientations. The concepts underlying the subscales are described by McLees (1988) as follows:

1. **Ambition for leadership** describes nurses who want to be involved at the administrative level of jobs and professions. They want to be leaders, seek advancement, enjoy challenge, and are motivated by the opportunity to introduce new ideas and approaches at work.

2. **Job security** refers to nurses who look for long-term job security, lifetime employment, and such benefits as a pension plan.

3. **Family commitment** describes nurses who consider raising a family an important part of lives. They want to take time out from nursing careers to care for families, and if choices need to be made, family will come before career. They consider balancing family, friends, and profession important.

4. **Independence** is an orientation that identifies nurses who want to develop own

style and be responsible for decisions in work; they want to set own schedule and pace and become consultants and/or independent practitioners. They consider careers to be as important as partners' careers.

5. **Variety/adventure** describes nurses who want variety, adventure, and changes in work. They like being challenged, testing new skills, and moving to new geographical locations.

6. **Altruism** portrays nurses who want to improve the lives of others and be of service to others. The altruistic reward is more important than high salary.

7. **Self-esteem** describes nurses who want to be recognized as valuable members of the profession. They prefer to work for an organization which values their contribution.

8. **Professional integrity** describes nurses who are concerned with a personal sense of professional freedom, with the right to make decisions related to a career move, and acceptance of responsibility for either patients or students.

Content validity of McLees' (1988) instrument was established during the construction of the questionnaire by sending the questionnaire to "nurses with considerable experience, education, and research experience" (p. 42). Construct validity has been estimated using factor analysis techniques. The eight factors listed above emerged, which accounted for 52.6% of the variance. The Pearson product-moment correlation coefficients between factors were statistically significant for 17 of the 28 combinations. The internal consistency of the instrument assessed by a split-half reliability coefficient ranged from 0.83 to 0.62 for the eight factors.

Pilot Study

Prior to the pilot study, face validity of the Career Orientations for Nurses Questionnaire was evaluated by sending the questionnaire to two retired Canadian senior Nursing Officers and a retired military psychologist associated with the 1990 Occupational Analysis of Nursing Officers. Minor recommendations were incorporated into the questionnaire.

Content validity was also estimated by calculating a Content Validity Index (CVI). The questionnaire was sent to one committee member of the McLees' study (1988) and

one specialist in organizational behavior. After the CVI was determined, items that did not score close to 1.00 were modified for inclusion in the final questionnaire.

The pilot study was conducted to reveal problems related to the content, administration, and scoring of the Career Orientations for Nurses Questionnaire. It was carried out at the National Defense Medical Centre (NDMC) in Ottawa where a large sample of Nursing Officers was available. Thirty questionnaires were distributed and 26 were returned, for an 87% response rate. The researcher administered the pilot instrument under standardized conditions to a convenience sample consisting of nine junior officers, nineteen senior Captains, and two superior officers, including four male Nursing Officers. Whenever possible, the participants of the pilot study were grouped together so that the researcher could explain the purpose of the Career Orientations for Nurses Questionnaire and answer any questions. On a separate sheet of paper, the participants were asked to comment on the clarity of the instructions and the questions; the appropriateness of the items; the length of the questionnaire; and the time taken to complete the questionnaire.

In the pilot study, each participant took the questionnaire away for completion and returned it via military mail to the researcher. All respondents felt that the instructions were clear, the questionnaire was about the right length, and it took them about 29 minutes to complete. Four questions were modified in wording and one new question on gender was added to the final instrument.

Ethical Considerations

Prior to data collection, the proposal for the study was approved by the Joint Ethics Review Committee, Faculty of Nursing, University of Alberta. Written approval of the nature and feasibility of the research was also obtained from the researcher's military supervisor (Appendix J).

The topic of the study and the nature of the involvement were explained in a letter inviting the Nursing Officers to respond to the questionnaire. They participated voluntarily in this research, and consent to participate in the study was assumed on return of the completed questionnaire. To maintain anonymity, no identification was requested or obtained. No participant coding or identification number was marked on the

questionnaire or the envelope before mailing the questionnaire. Subjects indicated rank grouping only.

In order to respect the anonymity of participants where fewer than two subjects within a rank responded to a question, the data were not analyzed or published. Confidentiality was protected as only the researcher opened the returned questionnaires and only the researcher and her research committee had access to the raw data. All raw data were kept in a locked cabinet in the researcher's home during the study and transferred to computer disks for analysis. At the end of the study, the questionnaires were destroyed and the computer disks will be kept in a locked security cabinet at the researcher's home for the next seven years in accordance with the University of Alberta's research policy.

CHAPTER IV

Findings

The objective of this study was to explore the factors influencing the career development of military nurses in the Canadian Forces (CF). Demographic and other descriptive information were obtained via a survey of the serving CF Nursing Officers (NOs) population. There were 243 usable questionnaires processed representing a total population return rate of 73.6%.

The Career Orientations of Nurses Questionnaires (see Appendix F) was used to collect data. Part I, Career History, consists of four sets of variables (education, professional/communities activities, work history, and demographic data concerning self and family) that were analyzed using descriptive statistics including percentages, means, medians, ranges, and standard deviations. Comparisons were drawn between selected variables such as rank level and gender using Chi-square. Part II, Career Orientation Inventory's responses were analyzed using descriptive statistics such as means and standard deviations. Finally, one-way analysis of variance (ANOVA) of the career orientation mean factor scores and career history variables was conducted. Data were analyzed using the SPSS for Windows Release 5 (1992).

Characteristics of the Participants

Table 1 contains a general description of the gender, rank, ages marital status, status of the spouse, and parenthood for the population surveyed. The gender split of the respondents almost matches the actual population of Canadian military nurses which consists of 84% female and 16% male NOs. The male nurse proportion is much higher in the CF than the 5% reported for Canadian male nursing personnel (Statistics Canada, 1993).

The respondents' ages ranged from 23-55 years. The mean and median age of 38 years is the same as the Canadian registered nurse (RN) national median age reported by Baumgart and Wheeler (1992). In this survey, 28% of the nurses were never married, 63.4% were married, and 8.6% were separated or divorced. This 72% of the studied population being or previously married closely approximates the Canadian married nursing workforce of 70% (Baumgart & Wheeler, 1992).

Table 1

Characteristics of the Participants

Variable	Frequency	Percent	Mean	Range	SD
Gender (n = 243)					
Female	206	84.8			
Male	37	15.2			
Rank (n = 243)					
Lieutenant &					
Captain < 4 years	62	25.5			
Captain ≥ 4 years < 12 years	84	34.6			
Captain ≥ 12 years	72	29.6			
Major & Ranks Above	25	10.3			
Age (years)			38	23-55	7.9
Marital Status (n = 243)					
Never Married	68	28.0			
Married/Common Law	154	63.4			
Divorced/Separated	21	8.6			
Spouse Status (n = 242)					
Military Spouse	81	33.5			
Civilian Spouse	71	29.3			
No Spouse	90	37.2			
Have Children (n = 236)					
Yes	96	40.7			
No	140	59.3			

One third of the participants (n=81) who are married have a spouse serving in the CF. Forty percent of the respondents (n=96) have children. Of these, 33% have children under 18 years of age. Nationally, 42% of all Canadian households have children under 18 years of age at home (Statistics Canada, 1992). The age of the children varied from new-born to adult (Table 2). The average number of children per parent is 1.6 (SD = 0.5).

Table 2

Age of Children of Canadian Forces Nursing Officers

Age	N*	Percent
Under 3	40	26.1
3-5	32	20.9
6-12	46	30.1
13-17	19	12.4
18 +	16	10.5

* N = 153

The average age of marriage for military nurses is 26.4 years (SD = 5.1) (Table 3). If a nurse's spouse is military, the chances of being co-located on posting is 47.2%. However, if the nurse's spouse is civilian, the probability of co-location is 80.6%. If married, the CF member was asked whose career was more important. Half of the respondents (n = 78) said that both careers were equally important (Table 4).

Table 3

Age of Nursing Officers When First Married

Age	N*	Percent
16-19	2	1.2
20-24	69	40.6
25-29	63	37.1
30-34	25	14.7
35-39	7	4.1
40-44	2	1.2
45 +	2	1.2

* N = 170

Table 4

Importance of Career to Married Nursing Officer

Variable	N*	Percent
My own	53	34.4
My spouse/partner's	23	14.9
Equally important	78	50.6

* N = 154

Few family features were reported to affect the career of a military nurse and those that do, or did, are shown in Table 5.

Table 5

Family Features Affecting Nursing Officer's Career

Variable	N*	Percent
Children health care	3	8.6
Children education	5	14.3
Elderly parent	9	25.7
Spouse career	9	25.7
Health of member	1	2.8
Health of spouse	3	8.6
Support family members	2	5.7
Others factors	3	8.6

* N = 35

Career History

The average age at completion of the basic nursing program was 22.1 years (SD = 2.8) (Table 6). The factors that influenced the respondents' choice of a basic nursing education program are shown in Table 7. The main factors are geographical closeness of the educational institution, financial reasons, career plans, and advice of

friends and relatives.

Table 6

Age at Completion of Basic Nursing Program for Nursing Officers

Age	N*	Percent
16-19	16	6.6
20-24	199	81.9
25-29	20	8.2
30-34	8	3.3

* N = 243

Table 7

Factors Influencing Type of Basic Nursing Education Program for Nursing Officers

Variable	N*	Percent**
Only program available	15	5.7
Geographical closeness	110	45.3
Financial reasons	98	40.3
Advice of friends/relatives	57	23.5
Family ties/responsibility	30	12.3
Career plans	76	31.2
Did not know about any others	9	3.7
Other	44	18.1

* N = 243

** Participants could choose more than one factor.

Table 8 presents the type of basic nursing education program completed by the respondents. Half of the population graduated from a hospital school of nursing program, while the other half was almost equally divided between a college/institute or technical school of nursing program and university-based program.

Table 8

Basic Nursing Education Program of Canadian Forces Nursing Officers

Variable		N*	Percent
RN diploma:	Hospital School of Nursing	126	51.9
	College/Institute/ or Technical School of Nursing	58	23.9
Baccalaureate in Nursing		59	24.3

* N = 243

The highest level of education completed by the nurses in this study is presented in Table 9. The total percentage of participants with a baccalaureate degree is 49.4% (n=120), which is almost five times the Canadian proportion of 10.6%. The number of nurses who have completed a Master's program (2.9%) is 3½ times greater than the 0.8% Canadian average (Statistics Canada, 1991).

Table 9

Highest Completed Level of Education of Canadian Forces Nursing Officers

Variable	N*	Percent
RN diploma	116	47.7
Baccalaureate (nursing basic)	62	25.5
Baccalaureate (nursing post-basic)	53	21.8
Baccalaureate (non-nursing)	5	2.1
Master's (nursing)	6	2.5
Master's (non-nursing)	1	0.4

* N = 243

Presently, 24.7% of the CF nursing corps is enrolled in an advanced education program, working towards the completion of an undergraduate or graduate degree. Table 10 shows that after graduating from a RN program, nearly 85% (n = 206) of the CF

nurses completed a specialty nursing program. Forty-nine percent (n = 119) are Aeromedevac (flight nursing) trained, followed by training in Critical Care (20.6%), Obstetrics (18.5%), Community Health (13.6%), or Operating Room (13.1%) nursing. The *Other* nursing specialty education programs taken included Primary Care, Emergency Care, Nursing Unit Administration, Oncology/Palliative Care, Occupational Health Nursing, Neonatal Intensive Care, Burn and Plastic Surgery Care, Nurse Practitioner, or Nursing Management. Most CF nurses have completed at least one program and some a maximum of four programs.

Table 10

Specialty Nursing Education Program Since RN Graduation of Canadian Forces Nursing Officers

Variable	N*	Percent**
None	37	15.2
Clinical specialty course		
Obstetrics	45	18.5
Flight nursing	119	49.6
Critical Care	50	20.6
Operating Room	32	13.1
Psychiatric	17	7.0
Community Health	33	13.6
Teaching Diploma	1	0.4
Other	41	16.9

* N = 243

** Participants could choose more than one specialty.

Most of the Nursing Officers (84.9%) recollected the reason(s) for becoming a nurse. These reasons are presented in Table 11. The *Other* reasons expressed were people interaction, upgrading from RNA to RN, fulfillment of their "mother's" dream, dissatisfaction with another job, recommendation of an industrial psychologist following an aptitude test, and the perception that nursing jobs were available anywhere.

Table 11

Reasons for Becoming a Nurse for the Canadian Forces Nursing Officers

Reason	N*	Percent**
To help others	92	37.9
Employment opportunity	48	19.8
Interest in health care/science	37	15.2
Limited choice of women career	28	11.5
Money	19	7.8
Family member in the medical/nursing field	16	6.6
Romantic idea from novel/movie/book	15	6.1
Did not know what to do after high school	14	5.7
Summer nursing employment	9	3.7
Knew a nurse	1	0.4
Took care of sick relative	1	0.4
Like to be needed	1	0.4
Other	72	29.6

* N = 243

** Participants could choose more than one reason.

Of the study group, 76.5% undertook nursing training after completing high school (Table 12), while 23.5% first trained in another occupation. The O*ther* training reported include secretarial, medical assistant, accoun

ting, communication, and commercial pilot.

Table 12

Education Prior to Becoming a Nurse for Canadian Forces Nursing Officers

Variable	N*	Percent
None	186	76.5
Registered Nursing Assistant	10	4.1
Partial or completed university degree	29	11.9
Other	18	7.4

* N = 243

Professional/Community Activities

After joining the CF, NOs are not required to maintain professional nursing registration. Nevertheless, 93.8% (n = 228) of the CF nurses are registered with one of the Canadian nursing professional associations, and some of them are registered with two associations. The reasons not to be registered are showed in Table 13.

Table 13

Reasons for No Registration as a Professional Nurse for Canadian Forces Nursing Officers

Reason	N*	Percent
Costs too much	5	2.1
Not necessary	2	0.8
No interest	2	0.8
Not required by the CF	1	0.4
Other	5	2.1

* N = 15/243

The percentage of the population who holds a position in a nursing professional group is 11.2% (n = 27), while 40.3% is involved in various community activities (Table 14) and 31.3% (n = 76) are carrying a leadership role in a community organization.

Table 14

Involvement in Community Organizations of Canadian Forces Nursing Officers

Variable	N*	Percent
None	145	59.7
Church	44	18.1
Service	12	4.9
Youth	13	5.3
Community League	7	2.9
Other	22	9.1

* N = 243

Work History

Prior to joining the CF, more than 50% (n = 125) had previous experience in an urban general hospital (Table 15). The leading area of practice was on a medical/ surgical unit (62%) (n = 150). Military nurses with previous experience (58.4%) worked in at least one or two health care institutions (n = 142).

Table 15

Type of Organization for First Nursing Job of Canadian Forces Nursing Officers

Variable	N*	Percent
CF	57	23.6
General hospital (urban)	125	51.7
General hospital (rural)	33	13.6
Long-term care	1	0.4
Psychiatric hospital	9	3.7
Nursing home	1	0.4
Community health	3	1.2
Home care	4	1.7
Occupational health	1	0.4
Doctor's office	2	0.8
Other	6	2.5

* N = 242

The average age of nurses when joining the CF was 23.9 years (SD = 3.8) and 65.8% enrolled in the CF before age 25 (Table 16). The primary reasons for joining the CF are displayed in Table 17.

Table 16

Age of Nurses When Joining the Canadian Forces as Nursing Officers

Age	N*	Percent
15-19	22	9.1
20-24	138	56.8
25-29	56	23.0
30-34	27	11.1

* N = 243

Table 17

Reasons for Joining the Canadian Forces as Nursing Officers

Reason	N*	Percent**
Diversity in nursing practice	79	33.5
Travel	76	32.2
Job security	53	22.5
Challenge	51	21.6
Adventure	34	14.4
Family member in the CF	31	13.1
UTPNCM/ROTP***	29	12.3
Upgrade education	22	9.3
Learn second language	19	8.1
Change of work	17	7.2
Gain more experience	15	6.4
Previous experience in the CF	13	5.5
Serve country	9	3.8
Other	49	20.8

* N = 236

** Participants could choose more than one reason.

*** Note UTPNCM/ROTP are two CF education plan for nurses (see Chapter 2).

Most of the respondents (70.5%) have already decided to pursue a career in the Canadian Forces, while 24.9% are still undecided, and 14.5% will not pursue a career in the CF (n = 35). More than half (51.7%) of the military nurses made their decision in the first two years of service and in the following three years the proportion increased to 81.3% (n = 170).

The career patterns of the nurses prior to joining the CF were Stationary Place-Bound (34.7%) and Mobile Lateral (25.2%) (Table 18). However, after enrollment the patterns changed and for this group, Mobile Advancing dominates at 48.3% (Table 19). Definitions of the career patterns can be found in Chapter 2.

Table 18

Career Pattern of Nurses Prior to Joining the Canadian Forces

Pattern	N*	Percent
Stationary Place-Bound	84	34.7
Mobile Lateral	61	25.2
Advancing Place-Bound	26	10.7
Mobile Reverting	5	2.1
Mobile Advancing	14	5.8
None of the above	52	21.5

* N = 242

Table 19

Career Pattern of Nursing Officers Since Joining the Canadian Forces

Pattern	N*	Percent
Stationary Place-Bound	20	8.3
Mobile Lateral	50	20.7
Advancing Place-Bound	12	5.0
Mobile Reverting	43	17.8
Mobile Advancing	117	48.3

* N = 242

The majority of respondents (57%) would prefer to be employed out of the nursing occupation for at least one posting to "broaden their horizon" and to be "more familiar with the work of other officers in the CF." The present employment of the surveyed group is displayed in Table 20. The percentage of staff nurse/team leader is 44.4% (n=108). This is less than the Canadian RN workforce at 55.1% (Statistics Canada, 1991).

Table 20

Present Position of Canadian Forces Nursing Officers

Variable	N*	Percent
Staff Nurse/Team Leader	108	44.4
Head Nurse/ Officer in Charge/ Senior Nursing Officer	54	22.2
Manager	11	4.5
Outside of occupation	21	8.6
Other	49	20.2

* N = 243

During their careers, the respondents were relocated between one and fourteen times (M = 4.8, SD = 2.97). Thirty-nine percent of the time the posting had been requested by the member and agreed to by the CF, 13.6% of the time the posting was required by the CF but not desired by the member, and 47.2% of the time the posting was requested by the CF and willingly accepted by the member. Usually 89.6% of the military nurses spend less than 36 months in a position (M = 20, SD = 14) (Table 21).

Table 21

Time in Present Position of Canadian Forces Nursing Officers

Months	N*	Percent
< 12	105	43.8
13-24	66	27.5
25-36	44	18.3
37-48	20	8.3
49-60	2	0.8
61 +	3	1.2

* N = 240

Three quarters of the Nursing Officers (n = 181) do not practice in the same area of nursing practice. If military nurses (n = 72) are in an education or management position they consider themselves a nurse first (31.1%) and educator, or manager, second (21.3%).

Profile of the Typical Canadian Forces Military Nurse

In summary, a Nursing Officer is likely to be a female, 38 years old, a Captain for at least four years, married, with no children. After finishing high school, she enrolled in a hospital school of nursing program for many reasons: closeness of the nursing establishment to her parents' home, financial reasons, and career plans. She completed the RN diploma at age 22 and her main reasons for entering the nursing profession were for altruistic reasons (to help others) and the employment opportunity offered by the nursing profession. Prior to joining the CF, she worked as a staff nurse in at least one general urban hospital on a medical/surgical unit, and at age 24 she decided to enroll in the CF. Her primary reasons were for the diversity in the nursing practice, opportunity to travel, and for job security. In the first two years of service, she decided to pursue a career as a military Nursing Officer. Since RN graduation, she might have worked on upgrading her basic nursing education and she likely attended one nursing specialty course, typically Aeromedevac training. She is registered in a professional nursing association and is not usually involved in a community organization. So far in her career, she has relocated five times and has been in her present position for 20 months. She will prefer to have at least one position out of the nursing occupation. Her career pattern tends to be mobile advancing. She probably married at age 26, and her spouse will have a greater chance to be relocated with her if he is civilian. Both careers appear to be equally important and no other family factors are affecting her career.

Career History Characteristics of Canadian Military Nurses

Career was previously defined as a series of work and family-related experiences and adventures. It involves notions of success and status that realize personal needs, individual aspirations, and societal expectations (McLees, 1988). Because this survey

was conducted with military nurses, career assumes a progression in the rank hierarchy. Data from responses to Part I of the Career Orientations of Nurses Questionnaire covering the career history (education, professional/community activities, work history, and demographic information), were analyzed according to rank groupings of the participants using Chi-square. These rank groupings were Lieutenant and Junior Captain (with less than 4 years in the rank of Captain), Captain with more than 4 years in the rank but less than 12 years, Captain with more than 12 years in the rank, and all superior officers (Major, Lieutenant-Colonel, and Colonel). Only statistically significant differences ($p \leq 0.05$) between rank groupings are discussed.

Education

Almost all (96%) of superior officers (Major and above ranks) completed their basic nursing program before age 23 (Table 22). However, only 50% of the Lieutenants and Junior Captains completed their basic nursing education at this age χ^2 (45, N = 243) = 77.6, $p \leq .001$.

Table 22
Age at Completion of Basic Nursing Education Program of Canadian Forces Nursing Officers

Age	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
≥ 22 yrs	31	50.0	56	66.7	57	79.2	24	96.0
23 - 28 years	26	41.9	25	29.8	11	15.3	1	4.0
≥ 29	5	8.1	3	3.6	4	5.5	--	--

χ^2 (45, N = 243) = 77.6, $p \leq .001$.

The difference in the type of basic nursing education was also statistically significant, χ^2 (6, N = 243) = 75.4, $p \leq .001$, as 88% of the superior officers graduated from a hospital school of nursing, while only 19.4% of the junior officers graduated from this type of establishment. However, the pattern is reversed at the baccalaureate program, as 56.5% of the Lieutenants and Junior Captains earned a university degree in Nursing, while only 4% of the Majors and above ranks had achieved this type of basic

nursing education (Table 23).

Table 23
Basic Nursing Education Program of Canadian Forces Nursing Officers

Variable	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
RN diploma:								
Hospital	12	19.4	38	45.2	54	75.0	22	88.0
College	15	24.1	25	29.8	16	22.2	2	8.0
University	35	56.5	21	25.0	2	2.8	1	4.0

χ^2 (6, N = 243) = 75.4, $p \leq .001$

For the highest completed level of education, 96% of the Majors and above ranks earned at least a baccalaureate degree, while 54.2% of the senior Captains (Captain ≥ 12 years) have no degree (Table 24).

Table 24
Highest Completed Level of Education of Canadian Forces Nursing Officers

Variable	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
RN diploma	23	37.1	53	63.1	39	54.2	1	4.0
BN basic	36	58.1	21	25.0	3	4.1	2	8.0
BN post-basic	2	3.2	10	11.9	27	37.5	14	56.0
BA	1	1.6	--	--	3	4.2	1	4.0
MN	--	--	--	--	--	--	6	24.0
M non-Nursing	--	--	--	--	--	--	1	4.0

χ^2 (15, N = 243) = 157.8, $p \leq .001$

After enrollment, military nurses completed many specialty nursing education programs. As shown in Table 25, only 4% of the Majors and above ranks have not been enrolled in at least one program compared to 32.3 % of the Lieutenants and Junior Captains. The proportion is also different for the programs of flight nursing, operating room, and obstetrics.

Table 25
Specialty Nursing Education Program Completed after Joining the Canadian Forces

Program	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
None[1]	20	32.3	16	19.0	6	8.3	1	4.0
Flight Nursing[2]	21	33.9	40	47.6	41	56.9	16	64.0
Operating room[3]	1	1.6	15	17.9	14	19.4	2	8.0
Obstetrics[4]	5	8.1	20	23.8	17	23.6	2	8.0

[1] χ^2 (3, N = 243) = 16.7, $p \leq .001$
[2] χ^2 (3, N = 243) = 9.9, $p \leq .05$
[3] χ^2 (3, N = 243) = 16.7, $p \leq .001$
[4] χ^2 (3, N = 243) = 9.2, $p \leq .05$

Four reasons for becoming a nurse were found statistically significant in the rank groupings. These reasons are limited choice of career, employment opportunity, interest in science and medical field, and to help others (Table 26).

Table 26
Reasons for Becoming a Nurse

Reason	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Limited choice of career[1]	3	4.8	7	8.3	10	13.9	8	32.0
Employment opportunities[2]	18	29.0	21	25.0	8	11.1	1	4.0
Interest in science[3]	13	21.0	16	19.0	6	8.3	--	--
To help others[4]	22	35.5	40	47.6	19	26.4	7	28.0

[1] χ^2 (3, N = 243) = 14.2, $p \leq .01$
[2] χ^2 (3, N = 243) = 12.1, $p \leq .01$
[3] χ^2 (3, N = 243) = 10.0, $p \leq .05$
[4] χ^2 (3, N = 243) = 8.5, $p \leq .05$

Work History

Results related to the type of health care institution where the respondents began their working life are presented in Table 27. A statistically significant difference between the rank groupings was identified χ^2 (30, N = 242) = 63.8, $p \leq .001$. The CF were the first organization for 48.4% of the Lieutenants and Junior Captains, 27.7% of the Captains ≥ 4 years, 4.2% of the Captains ≥ 12 years, 4% of the Majors and above ranks. Certain areas of first nursing practice were also statistically significant, specifically medical/surgical unit, intensive care, and floating from unit to unit (Table 28).

Table 27
Type of Health Care Institution for First Nursing Job

Type of health care institution	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
CF	30	48.4	23	27.7	3	4.2	1	4.0
Urban general hospital	21	33.9	34	41.0	51	70.8	19	76.0
Rural general hospital	6	9.7	12	14.5	12	16.7	3	12.0
Long-term care	--	--	1	1.2	--	--	--	--
Psychiatric hospital	1	1.6	5	6.0	2	2.8	1	4.0
Nursing home	--	--	1	1.2	2	2.8	--	--
Occupational	1	1.6	--	--	--	--	--	--
Doctor's office	--	--	1	1.2	1	1.4	--	--
Other	1	1.6	3	3.6	1	1.4	1	4.0

χ^2 (30, N = 242) = 63.8, $p \leq .001$

Table 28
Area of Practice in First Nursing Job of Nursing Officers

Area of practice	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Medical/surgical[1]	51	82.3	56	65.9	37	52.1	9	36.0
Intensive care[2]	4	6.5	5	5.9	3	4.2	6	24.0
Float [3]	12	19.4	11	12.9	5	7.0	--	--

[1] χ^2 (3, N = 243) = 63.8, $p \leq .001$
[2] χ^2 (3, N = 243) = 11.4, $p \leq .01$
[3] χ^2 (3, N = 243) = 8.6, $p \leq .05$

Table 29 illustrates the percentage of organizations worked in by rank grouping prior to joining the CF χ^2 (12, $\underline{N}$ = 243) = 48.7, $p \leq .001$. Furthermore, previous experience before joining the CF contributes to the difference in age when nurses enrolled in the CF χ^2 (51, $\underline{N}$ = 243) = 88.4, $p \leq .001$ (Table 30).

Table 29
Number of Organizations Before Joining the Canadian Forces

Number	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
None	28	45.2	21	25.0	2	2.8	1	4.0
One	23	37.1	26	31.0	37	51.4	11	44.0
Two	5	8.1	17	20.2	17	23.6	6	24.0
Three	3	4.8	9	10.7	7	9.7	5	20.0
Four	3	4.8	11	13.1	9	12.5	2	8.0

χ^2 (12, $\underline{N}$ = 243) = 48.7, $p \leq .001$

Table 30
Age When Joining the Canadian Forces

Age	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
≥ 22 yrs	36	58.0	36	42.9	14	19.4	6	24.0
23 - 28 years	19	30.7	36	42.9	47	65.3	18	72.0
> 29 years	7	11.3	12	14.2	11	15.3	1	4.0

χ^2 (51, $\underline{N}$ = 243) = 88.4, $p \leq .001$

Nurses joined the CF for different reasons. The statistically significant reasons among rank groupings are presented in Table 31.

Table 31
Reasons for Becoming a Nursing Officer

Reason	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Upgrade education[1]	11	17.7	7	8.2	5	7.0	--	--
UTPNCM/ROTP[2]	15	24.6	14	16.5	--	--	--	--
Travel[3]	13	21.0	21	24.7	32	45.1	10	40.0
Previous experience in the CF[4]	8	12.9	4	4.7	2	2.8	--	--

[1] χ^2 (3, N = 243) = 8.2, $p \leq .05$
[2] χ^2 (3, N = 243) = 23.5, $p \leq .001$
[3] χ^2 (3, N = 243) = 11.9, $p \leq .01$
[4] χ^2 (3, N = 243) = 8.7 $p \leq .05$

Table 32 shows that the decision to pursue a career as a Nursing Officer was made by 96% of all superior officers, while nurses in other ranks showed a lower percentage χ^2 (6, N = 241) = 29.6, $p \leq .001$. The time required to make that decision is shown in Table 33.

Table 32
Decision to Pursue a Career as a Nursing Officer

Variable	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Yes	31	50.0	59	71.1	56	78.9	24	96.0
No	11	17.7	15	18.1	8	11.3	1	4.0
Undecided	20	32.3	9	10.8	7	9.8	--	--

χ^2 (6, N = 241) = 29.6, $p \leq .001$

Table 33
Time to Decide to Pursue a Career as a Nursing Officer

Years	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
1-3	41	89.1	49	62.0	32	52.5	9	39.1
4-6	4	8.7	22	27.8	16	26.2	6	26.1
7-9	1	2.1	5	6.3	3	4.9	4	17.4
10-12	--	--	2	2.5	7	11.5	4	17.4
13-15	--	--	1	1.3	--	--	--	--
16-18	--	--	--	--	3	4.9	--	--

χ^2 (39, $\underline{N}$ = 209) = 70.8, $p \leq .001$

The pattern of career mobility prior to joining the CF is statistically significant χ^2 (15, $\underline{N}$ = 242) = 66.7, $p \leq .001$ (Table 34), as well as the career mobility after joining the CF χ^2 (12, $\underline{N}$ = 242) = 84.4, $p \leq .001$ (Table 35). All the superior officers are in the mobile advancing pattern.

Table 34
Career Pattern Prior to Joining the Canadian Forces

Pattern	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Stationary Place-Bound	22	35.5	22	26.2	33	46.5	7	28.0
Mobile Lateral	16	9.7	24	28.6	20	28.2	11	44.0
Advancing Place-Bound	3	4.8	11	13.1	7	9.9	5	20.0
Mobile Reverting	--	--	3	3.6	2	2.8	--	--
Mobile Advancing	2	3.2	2	2.4	8	11.3	2	8.0
None of the above	29	46.8	22	26.1	1	1.4	--	--

χ^2 (15, $\underline{N}$ = 242) = 66.7, $p \leq .001$

Table 35
Career Pattern after Joining the Canadian Forces

Pattern	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Stationary Place-Bound	15	24.2	5	6.0	--	--	--	--
Mobile Lateral	22	35.5	21	25.0	7	9.9	--	--
Advancing Place-Bound	6	9.7	3	3.6	3	4.2	--	--
Mobile Reverting	7	11.3	18	21.4	18	25.4	--	--
Mobile Advancing	12	19.4	37	44.0	43	60.6	25	100.0

χ^2 (12, $\underline{N}$ = 242) = 88.4, $p \leq .001$

When the military nurses were asked about the number of postings they accepted willingly or were required by the military, or were requested by them, the only two variables that were statistically significant among the rank groupings were the postings that were willingly accepted by the Nursing Officers χ^2 (33, $\underline{N}$ = 159) = 102.5, $p \leq .001$ (Table 36), and the postings requested by the military nurses χ^2 (27, $\underline{N}$ = 163) = 81.9, $p \leq .001$ (Table 37). It was noticed that due to the time in the CF, none of the Lieutenants and Junior Captains willingly accepted more than 6 postings nor did they request more than 3 postings.

Table 36
Number of Postings Willingly Accepted by Nursing Officers

Number	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
1-3	30	93.7	40	74.1	17	30.9	6	33.3
4-6	2	6.3	13	24.1	24	43.6	9	50.0
7-9	--	--	1	1.8	12	21.8	2	11.1
10-13	--	--	--	--	2	3.6	1	5.6

χ^2 (33, $\underline{N}$ = 159) = 102.5, $p \leq .001$

Table 37
Number of Postings Requested by Nursing Officers

Number	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
1-3	41	100.	43	78.1	34	70.8	9	47.4
4-6	--	--	12	21.8	9	18.7	3	15.8
7-9	--	--	--	--	5	10.4	6	31.6
10-12	--	--	--	--	--	--	1	5.2

χ^2 (27, N = 163) = 81.9, $p \leq .001$

Comparisons between the four rank groupings found that 77.4% of the Lieutenants and Junior Captains are employed in staff nurse/team leader positions, while none of the Major and above ranks are in this position (Table 38). Table 39 shows that only 4% of the Major and above ranks are still working in the same area of practice χ^2 (3, N = 243) = 32.3, $p \leq .0001$. Majors and above ranks consider themselves educators or managers first and nurses second. The opposite is true for all other ranks (Table 40).

Table 38
Present Position of the Nursing Officers

Position	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Staff Nurse/Team Leader	48	77.4	41	48.8	19	26.4	--	--
Head Nurse/Officer in Charge/ Senior Nursing Officer	3	4.8	20	23.8	23	31.9	8	32.0
Manager	1	1.6	2	2.4	2	2.8	6	24.0
Outside occupation	--	--	8	9.5	8	11.1	5	2.1
Other	10	4.1	13	5.3	20	8.2	6	2.5

χ^2 (12, N = 243) = 81.4, $p \leq .0001$

Table 39
Same Area of Nursing Practice for Nursing Officers

Variable	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Yes	32	51.6	16	19.0	13	18.1	1	4.0
No	30	48.4	68	81.0	59	81.9	24	96.0

χ^2 (3, N = 243) = 32.3, $p \leq .0001$

Table 40
Military Nurses Who Consider Themselves Educator/Managers First and Nurses Second

Variable	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Yes	5	8.2	11	13.3	20	28.6	15	60.0
No	7	11.5	24	28.9	34	48.6	7	28.0
Not applicable	49	80.3	48	57.8	16	28.8	3	12.0

χ^2 (6, N = 239) = 72.3, $p \leq .001$

Demographic Information

The age of the respondents among ranks are statistically different, as 98.4% of the Lieutenants and Junior Captains are under 40 years; 100% of the Majors and above ranks are over 40 years of age χ^2 (93, N = 243) = 351.1, $p \leq .001$ (Table 41).

Table 41
Age of Nursing Officers

Age	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
21-25	7	11.3	--	--	--	--	--	--
26-30	35	56.4	12	14.3	--	--	--	--
31-35	13	21.0	35	41.7	2	2.8	--	--
36-40	6	9.7	18	21.4	5	6.9	--	--
41-45	1	1.6	11	13.1	32	44.4	8	32.0
46-50	--	--	8	9.5	25	34.7	16	64.0
51-55	--	--	--	--	8	11.1	1	4.0

χ^2 (93, N = 243) = 351.1, $p \leq .001$

The marital status among the ranks is not statistically significant. Captains with more than 4 years in the rank have the highest proportion of military spouses (45.2%) and civilian spouses (27.4 %), while the Major and above ranks have the highest proportion of not having spouses (Table 42). Table 43 shows that Captains ≥ 4 years in the rank have the highest proportion of children (55.6%), while the Majors and above ranks have the lowest proportion (20.8%).

Table 42
Status of Spouse of Nursing Officers

Status of Spouse	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
Military	22	35.5	38	45.2	14	19.7	7	28.0
Civilian	16	25.8	23	27.4	26	26.6	6	24.0
No spouse	24	38.7	23	27.4	31	43.7	12	48.0

χ^2 (6, N = 242) = 13.5, $p \leq .05$

Table 43
Nursing Officers Who Have Children

Variable	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
No	44	71.0	36	44.4	41	59.4	19	79.2
Yes	18	29.0	45	55.6	28	40.6	5	20.8

χ^2 (3, N = 236) = 14.8, $p \leq .01$.

Comparison between the rank groupings of Nursing Officers reveals that 96.% of the Majors and above ranks believe that their careers are progressing according to their expectations, while only 59.5% of the Captains ≥ 4 years in the rank hold the same opinion (Table 44).

Table 44
Career Progressing According to Expectations of Nursing Officers

Variable	Lieutenant & Captain < 4 years		Captain ≥ 4 years < 12 years		Captain ≥ 12 years		Major & Above	
	N	%	N	%	N	%	N	%
No	20	33.9	32	40.5	26	38.2	1	4.0
Yes	39	66.1	47	59.5	42	61.8	24	96.0

χ^2 (3, N = 231) = 12.0, $p \leq .01$

In summary, when the career history was analyzed according to rank groupings of the Canadian Forces Nursing Officers, the majority of the Major and above ranks completed a basic nursing education program at age 22 or under. Most of them graduated from a hospital school of nursing program, upgraded their basic nursing education, completed a high level of education, and completed more nursing specialty education programs than any of the other rank groupings. When the reasons for becoming a nurse were described, the Major and above ranks felt that at the time of enrollment in nursing school they were facing limited career choices. Lieutenants and Junior Captains became nurses for job opportunity and interest in science and the medical/nursing field, while Captains ≥ 4 years but < 12 years entered for altruistic reasons (to help others).

With regard to work history, Majors and above ranks worked in an urban general hospital prior to joining the CF, while almost half of the Lieutenants and Junior Captains worked on a medical/surgical unit, with the CF being their first employer. Previous experience for the Majors and above ranks is evident because they joined the CF at a later age and for different reasons, especially to travel, while the Lieutenants and Junior Captains joined to acquire an education as well as to further their education. The decision to pursue a career in the CF has been made by almost all the Majors and above ranks, but only half of the younger rank grouping such as Lieutenants and Junior Captains have made that decision. Prior to joining the CF, the career pattern of Captains ≥ 12 years was stationary place-bound, while the Majors and above ranks were mobile

laterally. Since joining the CF, all the Majors and above ranks are found in the mobile advancing pattern. The majority of the Lieutenants and Junior Captains are found in staff nurse/team leader positions and are still nursing in the same area of practice. The bulk of the Majors and above ranks consider themselves educators and managers first and nurses second. However, the pattern is reversed for the Lieutenants and Junior Captains. No difference was found in professional/community activities among rank groupings. With regard to demographic characteristics, more than half of the Majors and above ranks are between 46-50 years of age, while the majority of the Captains ≥ 12 years are between 41-50; Captains ≥ 4 years are between 31-40 years of age, and Lieutenants and Junior Captains are between 26-30 years of age. Captains with greater than 12 years in the rank have the lowest proportion of military spouses, while Majors and above ranks have the lowest proportion for being married to a civilian spouse. Captains ≥ 4 years in the rank have the highest percentage of children. The majority of the Majors and above ranks perceived that their careers were progressing according to their expectations.

Career Orientations of Canadian Military Nurses

Part II of the Career Orientations of Nurses Questionnaire contained items of the Career Orientation Inventory. Analysis of these items using factor analysis techniques identified the factors that were used to describe the career orientations of military nurses.

The main purpose of the factor analysis techniques was for data reduction (Munro & Page, 1993; Polit & Hungler, 1987). The factor extraction phase sought clusters of highly interrelated variables while the orthogonal rotation maintained the independence of factors and produced correlated factors. Using a varimax orthogonal rotation, all 47 items of Part II: Career Orientation Inventory loaded at or above the cut-off value of 0.35. Factor analysis results indicated that there were 13 possible solutions which satisfied the Kaiser criterion at a cumulative percentage of 63.1%. Overall, the following criteria were used for the selection of items contained in the eight factor solution: (a) the loading factor of a retained item was greater than or equal to 0.35; (b) items which loaded on more than one factor were retained in the factor with the highest loading; and (c) the item contributed logically to the meaning of the factor. Eight factors accounted for 50% of the variance. The eight factors were labelled: (a) ambition for

leadership, (b) family commitment, (c) autonomy, (d) self-esteem, (e) technical competence, (f) variety/ adventure, (g) job security, and (h) professional integrity.

Factor 1: Ambition for Leadership

This factor consisted of 9 items with loadings ranging from 0.70 to 0.42 (Table 45). Item 14, "being involved in the decision-making level in my profession," also loaded on the fifth factor (technical competence). As the loadings were 0.50 and 0.42 respectively, the item was retained with Factor 1. The items describe characteristics which can be attributed to leadership and administrative functions demonstrated by military nurses. The items "responsible for the leadership of a particular group of staff" and "being involved at the decision-making level" reveal attributes of wanting to be a leader. Two items relating to the rank identity of the military component were part of this factor: "being identified and known by my rank" and "the prestige which results from being identified as a member of the CF." Therefore, these items that combine leadership image and managerial ability were seen to be similar to ambition.

Table 45
Factor Items and Loadings for Factor 1: Ambition for Leadership

No.	Item	Factor Loading
36	I prefer to be responsible for the leadership of a particular group of staff.	0.70
5	Being identified and known by my rank.	0.69
4	The challenge of organizing others.	0.67
11	To become a leader in my nursing profession.	0.67
35	I want to be (I am) involved in nursing education or administration.	0.60
15	The prestige which results from being identified as a member of the CF.	0.53
29	I prefer to have the responsibility for a group of patients or students or staff.	0.51
14	Being involved in the decision-making level in my profession.	0.50
22	Advancement in my career has been the motivating factor in the work related moves I have made.	0.42

Factor 2: Family Commitment

The five items which loaded under Factor 2 pertain to the degree to which family responsibility features influence military nurses in their career decisions (Table 46). Raising a family is considered an integral part of a career, and if required to choose between family needs and a promotion which involves a move alone to another geographical area, the choice of the family is more meaningful. Factor loadings of 0.84 to 0.65 were the highest values for any of the eight factors.

Table 46
Factor Items and Loadings for Factor 2: Family Commitment

No.	Item	Factor Loading
47	Being with or raising my family is an important part of my career.	0.84
19	Being able to take time out of my nursing career to raise my family.	0.78
17	Being able to work as a nurse while I raise my family.	0.75
44	If I had to make a choice between my family's needs and a promotion which involves a move alone to another geographical area I would choose my family.	0.74
3	Being able to maintain a balance between my profession and my family and friends.	0.65

Factor 3: Autonomy

The five items that make up this factor illustrate the autonomy in different nursing practices (Table 47). Being autonomous in making decisions, developing a nursing style, and using interpersonal skills to help others are integral parts of the nursing profession. Item 23, "I have always seen my nursing (education or practice) career as an opportunity to help other people," also loaded on the fourth factor. As the loading factors were 0.41565 and 0.41503 respectively, it was decided that this item fit better with Factor 3 than Factor 4, Self-Esteem.

Table 47
Factor Items and Loadings for Factor 3: Autonomy

No.	Item	Factor Loading
7	Being able to make my own decisions about the nursing care of my patients or my work.	0.76
6	To be able to develop my own nursing style.	0.71
10	Being able to use my interpersonal and helping skills in the care of my patients or working with students or with staff.	0.62
9	The opportunity to see others change because of what I do.	0.49
23	I have always seen my nursing (education or practice) career as an opportunity to help other people.	0.42

Factor 4: Self-Esteem

Eight items comprise Factor 4 which expresses the feeling of military nurses of being in control of their professional and personal life (Table 48).

Table 48
Factor Items and Loadings for Factor 4: Self-Esteem

No.	Item	Factor Loading
31	The ability to move about and work in different places has been important to me in my career.	0.63
32	I like to think of myself as part of the CF.	0.61
16	A career which enables me to work in a variety of practice or teaching areas.	0.57
28	The opportunity to test my skills in different work settings is what I really want as a Nursing Officer.	0.54
33	I want a career in which I can be committed to improving the life of other people.	0.48
30	I believe that my career is as important as the career of my spouse/partner (or it would be if I had a spouse/partner).	0.47
38	I see myself as a valuable member of the nursing or teaching or managerial team in the CF.	0.38
24	I prefer to work for an organization which will value my contribution.	0.36

Factor 5: Technical Competence

The eight items which loaded on Factor 5 were related to technical competence in nursing practice and career. For example, technical competence means moving to other jobs to develop new expertise, being highly skilled, working with advanced technical equipment, and being challenged and helping others to attain their goals (Table 49). Item 8, "challenging work situations," also loaded on the Factor 3 (autonomy). As the loadings were 0.39 and 0.40 respectively, the item was retained with Factor 5 where it seemed more appropriate.

Table 49
Factor Items and Loadings for Factor 5: Technical Competence

No.	Item	Factor Loading
39	I will move (I have moved) into an administrative position (head nurse, supervisor, etc.) only if (as) it gives me more opportunity to develop my clinical, or teaching, or administrative expertise.	0.63
37	I want the opportunity to be involved in the decisions that affect my work.	0.54
13	Working with advanced technical equipment.	0.53
12	The opportunity to use my skills in developing new approaches in my practice.	0.48
45	I believe that I am highly skilled in my area of practice.	0.42
8	Challenging work situations.	0.40
25	Throughout my career I have been motivated by the opportunity to introduce new ideas in my work situation.	0.39
41	Helping other people to attain their goals has always been more important to me than earning a high salary.	0.35

Factor 6: Variety/Adventure

Four items loaded Factor 6. The first two items, which express a concern for geographical security, loaded negatively and are therefore consistent with the items expressing the desire for variety and adventure (Table 50).

Table 50
Factor Items and Loadings for Factor 6: Variety/Adventure

No.	Item	Factor Loading
43	I would prefer to work for an organization that will allow me to remain in one geographical location.	- 0.73
46	Remaining in my present geographical location is more important than promotion.	- 0.69
42	I would move to another geographical location to advance my career rather than stay in my area of practice.	0.61
26	Throughout my career I have been motivated by a sense of adventure.	0.35

Factor 7: Job Security

This three-item factor was related to military nurses looking at the CF as an employer with a strong benefits plan and long-time employment. The loading of items ranged from 0.76 to 0.71 (Table 51).

Table 51
Factor Items and Loadings for Factor 7: Job Security

No.	Item	Factor Loading
40	I want to work in an organization where I can be assured of life-time employment.	0.76
1	An organization which will give me long term security.	0.72
18	Security through benefits such as a pension plan.	0.71

Factor 8: Professional Integrity

The five items of Factor 8 are a blend of nursing and military professionalism. These items relate to independence in practice, a sense of values, and a commitment to the nursing profession (Table 52).

Table 52
Factor Items and Loadings for Factor 8: Professional Integrity

No.	Item	Factor Loading
2	A position where I am able to set my own work hours, schedule, and pace.	0.64
20	Rather than compromise my commitment to nursing, I would be willing to slow down my career advancement.	0.52
27	I always wanted to become a consultant or to have my own private nursing practice.	0.44
21	I consider my nursing professionalism to be as important as my military professionalism.	0.43
34	My career has been motivated by concern for my own sense of freedom.	0.35

Intercorrelations among factors are shown in Table 53. There was a positive correlation among ambition for leadership (Factor 1) and four other factors: autonomy (Factor 3), self-esteem (Factor 4), technical competence (Factor 5) and variety/adventure (Factor 6). Positive correlations were also evident among the factors of autonomy (Factor 3), self-esteem (Factor 4), and technical competence (Factor 5); and among self-esteem (Factor 4), technical competence (Factor 5), and variety/adventure (Factor 6). A negative correlation (- 0.24) was found between family commitment (Factor 2) and variety/ adventure (Factor 6).

Table 53
Intercorrelations Among the Eight Factors

Factor	1	2	3	4	5	6	7	8
1 Ambition for leadership	--							
2 Family commitment	-.05							
3 Autonomy	.38***	.17**						
4 Self-esteem	.48***	-.10	.48***					
5 Technical competence	.52***	.08	.47***	.46***				
6 Variety/Adventure	.23***	-.24***	.19**	.33***	.19**			
7 Job security	.16*	.11	.11	.16**	.13*	.01		
8 Professional integrity	.16*	-.06	-.01	.04	.09	.10	.01	-

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Reliability of Part II: Career Orientations Inventory

The internal consistency reliability of Part II: Career Orientations Inventory and each subscale was assessed by using Cronbach's alpha coefficient. The standardized item alpha is .87. Table 54 presents the reliability coefficients of the Career Orientations subscales.

Table 54
Reliability Coefficients of the Career Orientation Subscales

Subscale	Number of Items	Reliability Coefficient
Ambition for leadership	9	.82
Self-esteem	8	.73
Technical competence	8	.70
Family commitment	5	.85
Autonomy	5	.72
Professional integrity	5	.39
Adventure	4	.65
Job security	3	.72

In summary, factor analysis was used for Part II: Career Orientations Inventory for data reduction and identification of factors that describe the career orientations of military nurses. The analysis revealed eight factors which delineate the values, motives, and talents that nurses use in their career. Factor intercorrelations and reliability estimates indicated homogeneity of the factors. The relationship among the factors was statistically significant for 16 of the 28 combinations.

Relationship Between Career History Characteristics and Career Orientation Factors

Career Orientations

The ranking of the career orientation factors for the military population is presented in Table 55 and compared with results from two related nursing studies (McLees, 1988; Jackle, 1993). In this study, it was found that the first career orientations for the Canadian Forces military nursing population was autonomy, followed by self-esteem and job security. Variety/adventure ranked fourth, followed by technical competence and family commitment. The last two career orientation factors were ambition for leadership and professional integrity.

Analysis of variance (ANOVA) was used to determine the relationship between the career orientation factors and the career history variables. The items on Part II: Career Orientations Inventory were scored on a four point Likert-type scale with "not important" or "not true" equal to 1 and "very important"or "very true" equal to 4. The item score for each factor was totaled and the mean was used as the factor or scale score. The 0.49 and 0.50 scale points of each Likert-scale value were selected as the lower and upper range points for the means. A descriptive value label was then applied to the range as follows:

1. The lower range of mean scores, 1.0 to 1.49, is designated "not important" or "not true" to the respondents.

2. The moderately low range of mean scores, 1.50 to 2.49, is designated as "somewhat important" or "partially true" to the respondents.

Table 55

Career Orientations--Total Group Compared with Studies of Nurses

Component	Fortin (1994)			Jackle (1993)	McLees (1988)		
	Rank	Mean	SD	Rank	Rank	Mean	SD
Autonomy (Independence)	1	3.36	.46	2	3	3.30	.49
Self-esteem	2	3.33	.44	--	2	3.22	.48
Job security	3	3.18	.66	6	6	2.49	.51
Variety/adventure	4	3.04	.68	5	5	2.75	.63
Technical competence	5	2.99	.43	--	--	--	--
Family commitment	6	2.85	.82	3	1	3.5	.60
Ambition for leadership	7	2.73	.56	7	8	2.23	.64
Professional integrity	8	2.23	.49	4	7	2.46	.60
Altruism	--	--	--	1	4	3.22	.48

3. The moderately high range of means scores, 2.5 to 3.49, is designated "important" or "true" to the respondents.

4. The highest range of mean scores, 3.5 to 4.0, is designated as "very important" or "very true" to the respondents.

These descriptive value labels were used to describe the importance of the orientation as values, motives, or talents of the respondents.

Education

Four career history variables were found to have statistically significant differences among groups on career orientation factors: basic nursing education, highest completed level of education, enrollment in advanced education, and recollection of the decision to become a nurse.

Basic nursing education program. The mean factor scores for the career orientation factors, according to the basic nursing education program of the respondents, are presented in Table 56. The respondents were differentiated in three groups and were statistically significant for family commitment and job security. On family commitment, significantly higher mean factor scores are found for the baccalaureate in nursing (BN) graduates ($M = 3.08$) than either college ($M = 2.93$) or hospital diploma graduates ($M = 2.70$), $F(2, 242) = 4.84$, $p < .01$. On job security, the two diploma groups have a higher mean factor score ($M = 3.24$) than the baccalaureate group ($M = 2.96$) $F(2, 242) = 4.28$, $p < .05$.

Table 56

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Basic Nursing Education Program

	Basic Nursing Education Program			
	Group A Hospital Diploma n = 126	Group B College Diploma n = 58	Group C BN Degree n = 59	
Orientation	Mean	Mean	Mean	F - ratio
Ambition for leadership	2.74	2.72	2.70	0.07
Family commitment	2.70	2.93	**3.08**	**4.84****
Autonomy	3.33	3.38	3.38	0.24
Self-esteem	3.37	3.35	3.23	2.00
Technical competence	2.30	2.97	2.98	0.10
Variety/adventure	3.00	3.14	3.02	0.86
Job security	**3.24**	**3.24**	2.96	**4.28***
Professional integrity	2.18	2.22	2.33	1.89

* $p < .05$, ** $p < .01$

Highest completed level of education. Table 57 shows that nurses with a RN diploma had higher mean factor scores for family commitment ($M = 2.95$) than nurses with a baccalaureate degree ($M = 2.81$) or with a Master's degree ($M = 1.95$), $F(2, 242) = 5.33$, $p < .01$). Family commitment is an "important" orientation for the RN diploma respondents and "somewhat important" for the respondents with a Master's degree. Nurses with a baccalaureate degree have a significantly higher mean score ($M = 2.34$) for professional integrity than nurses with a master's degree ($M = 2.17$) or nurses with an RN diploma ($M = 2.11$), $F(2, 242) = 6.06$, $p < .01$.

Table 57

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Highest Completed Level of Education

Orientation	RN Diploma n = 116 Mean	Baccalaureate Degree n =120 Mean	Master's Degree n=7 Mean	F ratio
Ambition for leadership	2.66	2.78	2.96	1.98
Family commitment	**2.95**	2.81	1.95	**5.33****
Autonomy	3.39	3.34	3.26	0.59
Self-esteem	3.37	3.29	2.75	1.02
Technical competence	2.97	2.99	3.05	0.15
Variety/adventure	3.05	3.00	3.50	1.80
Job security	3.25	3.11	3.00	1.61
Professional integrity	2.11	**2.34**	2.17	**6.06****

** $p < .01$

Enrollment in advanced education. Table 58 shows that the respondents enrolled in undergraduate studies scored significantly higher on ambition for leadership (M = 2.94), than those who are not enrolled (M = 2.68) or enrolled in graduate studies (M = 2.76), $F(2, 242) = 4.01$, $p < .05$). On variety/adventure, the nurses enrolled in undergraduate studies (M = 3.27) have a significantly higher mean score than the nurses not enrolled in advance studies (M = 2.97) or nurses enrolled in graduate studies (M = 3.20), $F(2, 242) = 4.02$, $p < .05$.

Table 58

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Enrollment in Advanced Education

Orientation	Not enrolled n = 183 Mean	Enrolled in under-graduate studies n = 42 Mean	Enrolled in graduate studies n = 18 Mean	F ratio
Ambition for leadership	2.68	**2.94**	2.76	**4.01***
Family commitment	2.87	2.80	2.75	0.24
Autonomy	3.34	3.40	3.44	0.63
Self-esteem	3.30	3.45	3.36	2.01
Technical competence	2.95	3.02	3.20	3.02
Variety/adventure	2.97	**3.27**	3.20	**4.02***
Job security	3.17	3.25	2.96	1.25
Professional integrity	2.19	2.36	2.36	2.77

* $p < .05$

Recollection of the decision to become a nurse. The results from the comparison of the mean factor scores on the career orientation variables for those respondents who did have or did not have a specific recollection of the decision to become a nurse are shown in Table 59. A significant difference was found for technical competence, where nurses who had a specific recollection had a higher mean ($M = 3.01$) than the ones who did not ($M = 2.86$), $F(1, 240) = 3.94$, $p < .05$.

Table 59

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Recollection of Decision to Become a Nurse

Orientation	Yes n = 203 Mean	No n = 38 Mean	F ratio
Ambition for leadership	2.73	2.67	0.31
Family commitment	2.86	2.78	0.33
Autonomy	3.37	3.29	0.90
Self-esteem	3.35	3.23	2.56
Technical competence	**3.01**	2.86	**3.94***
Variety/adventure	3.06	2.95	0.86
Job security	3.18	3.17	0.00
Professional integrity	2.22	2.27	0.40

* $p < .05$

Professional/Community Activities

Only one career history variable revealed significant differences among the categories of respondents: maintaining nursing professional registration.

Maintaining nursing professional registration. Table 60 shows the comparison of factor mean scores of the career orientation variables for the respondents. Those respondents who maintained their nursing registration have a significantly higher mean ($M = 3.34$) for self-esteem than those who did not ($M = 3.07$), $F(1, 242) = 5.31$, $p < .05$.

Table 60

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Maintaining Nursing Professional Registration

Orientation	Yes n = 228 Mean	No n = 15 Mean	F ratio
Ambition for leadership	2.74	2.57	1.33
Family commitment	2.84	3.00	0.53
Autonomy	3.37	3.25	0.86
Self-esteem	**3.34**	3.07	**5.31***
Technical competence	2.99	2.82	2.17
Variety/adventure	3.05	2.88	0.86
Job security	3.18	3.04	0.63
Professional integrity	2.23	2.16	0.31

* $p < .05$

Work History

Six career history variables were statistically significant in terms of career orientations: number of agencies worked with before joining the CF, rank, decision to pursue a career in the CF, preference to be employed out of the nursing occupation, present position in the CF, and consideration of educator or manager first and nurse second.

Number of agencies worked with before joining the CF. The results from comparing the mean scores on the career orientations variables for the respondents according to the number of agencies worked with before joining the CF are reported in Table 61. The five groups of respondents can be differentiated in terms of one career orientation: professional integrity. Those respondents who worked in four or more agencies have a significantly higher mean score ($\underline{M}$ = 2.49) than any of the other groupings.

Table 61

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Number of Agencies Worked With Before Joining the CF

Orientation	None n = 52 Mean	One n = 97 Mean	Two n = 45 Mean	Three n = 24 Mean	Four or More n = 25 Mean	F ratio
Ambition for leadership	2.83	2.69	2.67	2.78	2.70	0.66
Family commitment	3.31	2.80	2.67	2.82	2.82	2.32
Autonomy	3.38	3.35	3.31	3.36	3.42	0.30
Self-esteem	3.32	3.29	3.28	3.40	3.53	1.81
Technical competence	3.00	2.95	2.97	3.02	3.05	0.36
Variety/adventure	2.97	3.07	2.94	2.97	3.34	1.78
Job security	3.08	3.20	3.21	3.19	3.18	0.37
Professional integrity	2.35	2.14	2.15	2.21	**2.49**	**3.89****

** $p < .01$

Rank. The findings from comparing the mean scores on the career orientation variables for respondents according to their present rank groupings are reported in Table 62. The four groups of respondents can be differentiated in terms of one career orientation: family commitment. Those respondent who are Captains ≥ 4 years in the rank have a significantly higher mean score ($M = 3.11$) for family commitment than the Lieutenants and Junior Captains ($M = 3.00$), or Captains ≥ 12 years in the rank ($M = 2.63$), or Majors and above ranks ($M = 2.22$), $F(3, 242) = 11.11$, $p < .0001$. Family commitment is "important" for the first three groups and "somewhat important" for the Major and above ranks.

Table 62

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Present Rank in the CF

Orientation	Lieutenant & Captain < 4 years n = 62 Mean	Captain ≥ 4 years < 12 years n = 84 Mean	Captain ≥ 12 years n = 72 Mean	Major & Above n = 25 Mean	F ratio
Ambition for leadership	2.69	2.82	2.61	2.83	2.22
Family commitment	3.00	**3.11**	2.63	2.22	**11.11*** **
Autonomy	3.36	3.45	3.29	3.22	2.55
Self-esteem	3.25	3.40	3.31	3.32	1.35
Technical competence	2.97	3.03	2.93	2.99	0.70
Variety/adventure	3.15	3.08	2.93	2.95	1.34
Job security	2.99	3.26	3.24	3.15	2.31
Professional integrity	2.21	2.25	2.17	2.37	1.10

*** $p < .0001$

Decision to pursue a career as a Nursing Officer. The mean factor scores on the career orientation factors were compared for respondents who have decided to pursue a career as a Nursing Officer (NO) and those who have not decided or are still undecided. The findings are presented in Table 63. Those who have decided not to pursue a career as a NO scored significantly higher on family commitment ($M = 3.32$) than those who have decided ($M = 2.71$) or those who are undecided ($M = 3.07$), $F(2, 240) = 9.92$, $p < .001$. Self-esteem, as a value, is significantly more important to the respondents who have decided to pursue a career as NO ($M = 3.38$) than to those who have decided not to pursue a career ($M = 3.21$) or the undecided group ($M = 3.17$), $F(2, 240) = 4.83$, $p < .01$. Job security is an important value to those who have decided to pursue a career ($M = 3.27$), while this value is decreasing for the respondents who have not decided to pursue a career ($M = 3.01$) and for the undecided group ($M = 2.85$) ,$F(2, 240) = 7.80$, $p < .001$.

Table 63

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Decision to Pursue a Career as a Nursing Officer

Orientation	Yes n = 170 Mean	No n = 35 Mean	Undecided n = 36 Mean	F ratio
Ambition for leadership	2.78	2.61	2.59	2.45
Family commitment	2.71	**3.32**	3.07	**9.92*** **
Autonomy	3.34	3.52	3.28	2.80
Self-esteem	**3.38**	3.21	3.17	**4.83****
Technical competence	2.98	3.08	2.89	1.65
Variety/adventure	3.10	2.94	2.87	2.28
Job security	**3.27**	3.01	2.85	**7.80*** **
Professional integrity	2.23	2.21	2.26	0.10

** $p < .01$, *** $p < .001$

Preference to be employed out of the nursing occupation. Table 64 shows the mean factor scores for career orientations according to the preference to be employed out of the nursing occupation. The two groups of respondents can be differentiated in terms of three orientations: ambition for leadership, variety/adventure, and professional integrity. On ambition for leadership, significantly higher mean factor scores are found for the respondents that responded yes (M = 2.80) than the ones who responded no (M = 2.63), $F(1, 235) = 5.50$, $p < .05$. On variety/adventure, the participants who responded yes (M = 3.11) have significantly higher mean scores than the participants who responded no (M = 2.93), $F(1, 235) = 4.23$, $p < .05$. Similar results are found on professional integrity, as the yes answers (M = 2.33) show significantly higher mean scores than the no answers (M =2.11), $F(1, 235) = 12.98$, $p < .001$.

Table 64

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Preference to be Employed Out of the Nursing Occupation

Orientation	Yes n = 134 Mean	No n = 102 Mean	F ratio
Ambition for leadership	**2.80**	2.63	**5.50***
Family commitment	2.79	2.95	2.22
Autonomy	3.35	3.37	0.13
Self-esteem	3.35	3.30	0.74
Technical competence	2.99	2.98	0.00
Variety/adventure	**3.11**	2.93	**4.23***
Job security	3.18	3.18	0.00
Professional integrity	**2.33**	2.11	**12.98*****

* $p < .05$, *** $p < .001$

Present position in the CF. The findings presented in Table 65 show the respondents who are working in a staff nurse/team leader position (M = 3.13) score significantly higher on one career orientation: family commitment. The group of respondents who are working as managers (M = 2.87) score higher than the head nurse group (M = 2.65), military nurses working outside of the occupation (M =2.58), and nurses working in other positions (M =2.57), $F(4, 242) = 6.31$, $p < .001$.

Educator or manager first and nurse second. Table 66 shows that the three groups of respondents can be differentiated in terms of three career orientations: ambition for leadership, family commitment, and professional integrity. On ambition for leadership, the respondents who consider themselves educators or managers first (M = 2.90), $F(2, 238) = 3.89$, $p < .05$ show a significantly higher mean factor score than the other two groups. Family commitment is significantly higher for the respondents who found that this question was not applicable to their situations (M = 3.05), $F(2, 238) = 7.46$, $p < .001$), and professional integrity is also significantly higher for the respondents who consider themselves educators or managers first and nurses second (M = 2.42), $F(2, 238) = 5.60$, $p < .01$.

Demographic Data

Nine demographic variables were statistically significant in terms of career orientations: gender, marital status, spouse of the military nurse in the CF, move of the CF spouse with the military nurse, move of the civilian spouse with the military nurse, importance of career, having children, career progressing according to expectations, and perception of gender difference in career progression as a Nursing Officer.

Table 65

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Present Position in the CF

Orientation	Staff nurse n = 108 Mean	Head Nurse n = 54 Mean	Manager n = 11 Mean	Outside n = 21 Mean	Other n = 49 Mean	F ratio
Ambition for leadership	2.65	2.82	3.11	2.80	2.69	2.36
Family commitment	**3.13**	2.65	2.87	2.58	2.57	**6.31*** **
Autonomy	3.40	3.34	3.27	3.25	3.36	0.58
Self-esteem	3.28	3.31	3.39	3.38	3.44	1.30
Technical competence	2.98	2.95	3.11	3.11	2.93	0.91
Variety/adventure	3.00	3.08	2.84	2.95	3.16	0.86
Job security	3.15	3.15	3.38	3.18	3.21	0.36
Professional integrity	2.18	2.27	2.51	2.37	2.17	1.91

*** $p < .001$

Table 66

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Consider Educator or Manager First and Nurse Second

Orientation	Yes n = 51 Mean	No n = 52 Mean	Not Applicable n = 116 Mean	F ratio
Ambition for leadership	**2.90**	2.70	2.66	**3.89***
Family commitment	2.55	2.75	**3.05**	**7.46*****
Autonomy	3.33	3.36	3.36	0.07
Self-esteem	3.37	3.37	3.27	1.39
Technical competence	3.03	2.97	2.97	0.50
Adventure	3.08	2.98	3.05	0.46
Job security	3.13	3.19	3.17	0.11
Professional integrity	**2.42**	2.14	2.18	**5.60****

* $p < .05$, ** $p < .01$, *** $p < .001$

Gender. In Table 67, female respondents ($M = 3.39$) show a significantly higher mean factor score for autonomy than male respondents ($M = 3.17$), $F(1, 242) = 7.03$, $p < .01$.

Table 67
One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Gender

Orientation	Female n = 206 Mean	Male n = 37 Mean	F ratio
Ambition for leadership	2.73	2.70	0.05
Family commitment	2.86	2.82	0.06
Autonomy	**3.39**	3.17	**7.03****
Self-esteem	3.35	3.23	2.43
Technical competence	2.99	2.96	0.12
Variety/adventure	3.02	3.14	1.09
Job security	3.19	3.12	0.34
Professional integrity	2.22	2.29	0.67

** $p < .01$

Marital status. The three groups of respondents can be differentiated in terms of three career orientations: family commitment, self-esteem, and variety/adventure (Table 68). Family commitment shows a significantly higher mean factor score for the married/common-law group ($M = 3.10$) than the divorced/separated group ($M = 2.45$) and the never married group ($M = 2.41$), $F(2, 242) = 22.74$, $p < .001$. Self-esteem is "very important" and shows a significantly higher mean factor score for the divorced/separated group ($M = 3.54$) while it is "important" to the never married group ($M = 3.36$) and married/common-law group ($M = 3.29$), $F(2, 242) = 3.36$, $p < .05$. Variety/adventure is significantly more "important" to the never married group ($M = 3.26$) than to those respondents who are divorced/separated ($M = 3.14$) and the married/common-law group ($M = 2.93$), $F(2, 242) = 6.50$, $p < .01$.

Table 68

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Marital Status

Orientation	Never married n = 68 Mean	Married/ common-law n = 154 Mean	Divorced/ separated n = 21 Mean	F ratio
Ambition for leadership	2.75	2.71	2.77	0.14
Family commitment	2.41	**3.10**	2.45	**22.74*** **
Autonomy	3.40	3.31	3.54	2.91
Self-esteem	3.36	3.29	**3.54**	**3.36***
Technical competence	2.97	2.98	3.05	0.35
Variety/adventure	**3.26**	2.93	3.14	**6.50****
Job security	3.12	3.18	3.33	0.90
Professional integrity	2.26	2.20	2.37	1.35

* p < .05, ** p < .01, *** p < .001

Spouse in the CF. Table 69 presents three groups of respondents that can be differentiated on four career orientations: family commitment, autonomy, self-esteem, variety/adventure. Those respondents who have a spouse in the CF ($\underline{M}$ = 3.15) show a significantly higher mean score for family commitment than the respondents who do not have a spouse in the CF ($\underline{M}$ = 3.04) or have no spouse ($\underline{M}$ =2.43), $\underline{F}(2, 241)$ = 22.46, $\underline{p}<.0001$. Autonomy ($\underline{M}$ = 3.44), self-esteem ($\underline{M}$ = 3.41), and variety/adventure ($\underline{M}$ = 3.24) are significantly more important for the respondents who do not have a spouse.

Table 69

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Spouse in the CF

Orientation	Yes n = 81 Mean	No n = 71 Mean	No spouse n = 90 Mean	F ratio
Ambition for leadership	2.73	2.68	2.76	0.40
Family commitment	**3.15**	3.04	2.43	**22.46*** **
Autonomy	3.39	3.22	**3.44**	**5.29** **
Self-esteem	3.33	3.23	**3.41**	**3.45***
Technical competence	2.98	2.97	2.99	0.08
Variety/adventure	3.07	2.77	**3.24**	**10.32*** **
Job security	3.19	3.16	3.17	0.05
Professional integrity	2.13	2.28	2.27	2.31

* p < .05, ** p < .01, *** p < .0001

Move of the CF spouse with the military nurse. Family commitment, autonomy, and variety/adventure are the three career orientations that are significantly different among the four groups (Table 70). Family commitment is significantly important for the group whose CF spouse is able to move with the military nurse ($\underline{M}$ = 3.26), $\underline{F}(3, 241)$ = 17.80, $\underline{p}<.001$. However, variety/adventure is significantly more important for the group who have no spouse ($\underline{M}$ = 3.26). Autonomy shows equal significance for the

group who have a CF spouse and the group who have no spouse (M = 3.44).

Table 70
One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Move of the CF Spouse with Military Nurse

Orientation	Yes n = 37 Mean	No n = 43 Mean	No CF spouse n = 75 Mean	No spouse n = 87 Mean	F ratio
Ambition for leadership	2.69	2.76	2.70	2.75	0.24
Family commitment	**3.26**	3.07	3.05	2.38	**17.80*** **
Autonomy	**3.44**	3.36	3.22	**3.44**	**3.62***
Self-esteem	3.34	3.34	3.23	3.41	2.14
Technical competence	3.06	2.90	2.99	2.98	0.89
Variety/adventure	3.19	2.98	2.77	**3.26**	**8.47*** **
Job security	3.23	3.18	3.17	3.15	0.10
Professional integrity	2.17	2.11	2.28	2.27	1.55

* p < .05, ***p < .001

Move of the civilian spouse with the military nurse. Findings were similar to the move of a CF spouse with the military nurse. Family commitment, autonomy, and variety/adventure are the three career orientations that are significantly different among the four groups (Table 71). Family commitment is significantly important for the group whose CF spouse is able to move with the military nurses (M = 3.15), F(3, 240) = 15.01, p < .001. However, variety/adventure is significantly more important for the group who have no spouse (M = 3.24), F(3, 240) = 6.68, p < .001. Autonomy shows a significant difference for the group whose have no spouse (M = 3.43), F(3, 240) = 4.41, p < .01.

Table 71

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Move of the Civilian Spouse with Military Nurse

Orientation	Yes n=58 Mean	No n=14 Mean	CF spouse n= 81 Mean	No spouse n= 88 Mean	F ratio
Ambition for leadership	2.70	2.72	2.73	2.75	0.08
Family commitment	3.06	2.95	**3.15**	2.42	**15.01*** **
Autonomy	3.17	3.36	3.40	**3.43**	**4.41** **
Self-esteem	3.22	3.31	3.34	3.40	1.95
Technical competence	2.97	3.04	2.98	2.98	0.12
Variety/adventure	2.75	2.91	3.08	**3.24**	**6.68*** **
Job security	3.19	3.04	3.19	3.17	0.23
Professional integrity	2.28	2.17	2.15	2.28	1.31

** $p < 0.01$, *** $p < 0.001$

Importance of career. Examination of the mean factor scores is presented in Table 72. It showed that the variable, importance of career for military nurses, is significant for four career orientations: ambition for leadership, family commitment, self-esteem, and variety/adventure. Ambition for leadership is significantly higher for respondents who said that their career was more important ($M = 2.81$) than their spouse/partner ($M = 2.26$). Family commitment is significantly higher for the respondents who stated that their spouse/partner's career is more important ($M = 3.43$), $F(3, 241) = 18.99$, $p < .001$. Self-esteem ($M = 3.40$), $F(3, 241) = 11.84$, $p < .001$ and variety/adventure ($M = 3.24$), $F(3, 241) = 6.09$, $p < .001$ are more important for the respondents who do not have a spouse.

Table 72

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Importance of Career

Orientation	My own n = 53 Mean	My spouse/ partner n = 23 Mean	Equally important n = 78 Mean	No spouse n = 88 Mean	F ratio
Ambition for leadership	**2.81**	2.26	2.78	2.75	**6.57*** **
Family commitment	2.99	**3.43**	3.10	2.40	**18.99*** **
Autonomy	3.27	3.27	3.36	3.43	1.85
Self-esteem	3.31	2.85	3.39	**3.40**	**11.84*** **
Technical competence	3.00	2.88	3.00	2.99	0.50
Variety/adventure	3.00	2.64	2.95	**3.24**	**6.09*** **
Job security	3.28	3.19	3.13	3.16	0.55
Professional integrity	2.30	2.23	2.13	2.27	1.58

*** $p < .001$

Having children. The findings from comparison of the mean factor scores on the career orientation variables for the respondents who have children is reported in Table 73. On family commitment, the respondents who have children (M = 3.26) show significantly higher mean factor scores than the respondents who do not have any children (M = 2.57), F(1, 235) = 47.58, p<.001. However, those who do not have any children have a significantly higher score (M = 3.19, compared to M = 2.83), F(1, 235) = 16.16, p<.001 on the variety/adventure factor.

Table 73
One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Having Children.

Orientation	Children n = 96 Mean	No Children n = 140 Mean	F ratio
Ambition for leadership	2.74	2.72	0.05
Family commitment	**3.26**	2.57	**47.58*** **
Autonomy	3.32	3.38	0.83
Self-esteem	3.30	3.35	1.03
Technical competence	2.97	2.98	0.02
Variety/adventure	2.83	**3.19**	**16.16*** **
Job security	3.26	3.10	3.40
Professional integrity	2.22	2.23	0.02

*** p < .001

Career progressing according to expectations. In Table 74, the respondents who indicated that their career is not progressing according to their expectations (M = 3.01) have a significantly higher mean score than those who said the opposite (M = 2.74) for family commitment. Autonomy shows significantly higher scores for the respondents who stated that their career is not progressing to their expectations (M = 3.47), F(3, 230) = 5.62, p<.05.

Table 74

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Career Progressing According to Expectations

Orientation	Yes n = 152 Mean	No n = 79 Mean	F ratio
Ambition for leadership	2.72	2.77	0.48
Family commitment	2.74	**3.01**	**5.23***
Autonomy	3.32	**3.47**	**5.62***
Self-esteem	3.34	3.35	0.01
Technical competence	2.99	2.99	0.00
Variety/adventure	3.06	3.07	0.03
Job security	3.19	3.18	0.02
Professional integrity	2.20	2.30	2.41

* $p < .05$

Perception of gender difference in the career progression as a Nursing Officer. Table 75 presents the mean scores of the respondents who perceived that a gender difference exists in the career progression as a Nursing Officer. Professional integrity is significantly higher for the respondents who have this perception ($M = 2.43$) than for those who do not have this perception ($M = 2.16$), $F(1, 239) = 13.80$, $p < .001$.

Table 75

One-way Analysis of Variance of Mean Factor Scores on the Career Orientation Variables According to Perception of Gender Difference in Career Progression as Nursing Officer

Orientation	Yes n = 5 Mean	No n = 186 Mean	F ratio
Ambition for leadership	2.82	2.70	2.16
Family commitment	2.78	2.85	0.32
Autonomy	3.35	3.35	0.00
Self-esteem	3.33	3.33	0.00
Technical competence	3.01	2.97	0.25
Variety/adventure	3.06	3.03	0.04
Job security	3.17	3.16	0.01
Professional integrity	**2.43**	2.16	**13.80*** **

*** $p < .001$

In summary, **ambition for leadership** tends to be an "important" value to military nurses who are enrolled in undergraduate studies. They seem to prefer to be employed out of the nursing occupation. They consider themselves educators or managers first and nurses second, and they state that their own career is important.

Family commitment tends to be an "important" value to military nurses who graduated from a university nursing program or have a RN diploma as the highest completed level of education. They are Captains with more than 4 years in the rank, are employed as staff nurse/team leaders, and have decided not to pursue a career in the CF. They are married/common-law, have a spouse in the CF, and have their military spouse co-located with them. They state that the careers of their spouse/partners are more important than their own careers and their careers are not progressing according to their

expectations. They also have children.

Autonomy tends to be an "important" value to military nurses who are female and have no spouse. They state that their careers are not progressing according to their expectations.

Self-esteem tends to be a "very important" value to military nurses who are divorced/separated. Self-esteem also tends to be an " important" value to military nurses who have maintained their nursing professional registration and have decided to pursue a career in the CF. They have no spouse in the CF.

Technical competence tends to be an "important" value to military nurses who have recollection of the decision to become a nurse.

Variety/adventure tends to be an "important" value to military nurses who are enrolled in undergraduate studies and who seem to prefer to be employed out of the nursing occupation. They have never been married and have no children.

Job security tends to be an "important" value to military nurses who have graduated from a hospital or a college nursing program and have decided to pursue a career in the CF.

Professional integrity tends to be a " somewhat important" value to military nurses who have completed a baccalaureate degree as their highest level of education and have worked in four or more agencies before joining the CF. They seem to prefer to be employed out of the nursing occupation and consider themselves educators or managers first and nurses second. They also perceive a gender difference in the career progression of Nursing Officers.

Predominant Career Pattern of Canadian Military Nurses

The composition of each career pattern is shown in Table 76. In descending order, the largest group is mobile advancing (n = 117) which accounts for 48.5% of the Nursing Officer Corps. This group is followed by mobile lateral for almost 21% (n = 50) of the population. Close behind, mobile reverting consists of 17.8% (n = 43) of the population. The remaining two career pattern groups, stationary place-bound (8.3%) and advancing place-bound (5.0%), are much smaller.

Table 76
Frequency and Percentage Distribution for Career Pattern Groups

Pattern	Frequency	Percent
Stationary Place-Bound	20	8.3
Mobile Lateral	50	20.7
Advancing Place-Bound	12	5.0
Mobile Reverting	43	17.8
Mobile Advancing	117	48.3

N = 242

A description of the characteristics for each of the five career patterns is presented below. It includes education, family, community and professional involvement, and work history. The table of each career pattern includes the group size, frequency, percentage, appropriate mean, and the position (rank-place) from 1 to 5 that the career pattern group holds vis-à-vis the other four career pattern groups for each variable.

Career Pattern 1 - Stationary Place-Bound

This group consisted of 20 respondents (17 females and 3 males). Since joining the CF they have worked exclusively in a staff nurse/team leader position in the same health care institution. Table 77 presents the characteristics for the group. When compared with the other four groups, these respondents presented the following unique features:

1. They have the highest proportion (50%) of Baccalaureate degrees for the basic nursing program and the lowest proportion (20%) of RN diplomas from a hospital. The highest completed level of education is the Baccalaureate degree (55%) and none of the respondents has a Master's degree. This group graduated, on average, from a basic nursing education program at age 23.9, which is older than the mean of the other groups.

Table 77
Education, Demographic, and Work History of the Stationary Place-Bound Careerist

Characteristic		Career Pattern Stationary Place-Bound n = 20 f	%	Rank-place*
Basic Nursing Program: Hospital diploma		4	20	5
	College diploma	6	30	2
	Baccalaureate degree	10	50	1
Highest level of education: RN		9	45	4
	Baccalaureate degree	11	55	1
	Master's degree	--	--	--
Enrolled in advance education		5	25	2
Completed a specialty clinical nursing program		10	50	5
Can recall decision to become a nurse		17	85	2
Have always worked in the same area of practice		13	65	1
Gender:	Female	17	85	3
	Male	3	15	3
Married (includes widowed or divorced)		13	65	5
Have children		8	40	3
Spouse in the CF		6	30	5
Rank:	Lieutenant & Captain < 4 years	15	75	1
	Captain ≥ 4 years, <12 years	5	25	4.5
	Captain ≥ 12 years	--	--	--
	Major & Above	--	--	--
Involved in community organization		8	40	3
Hold office in community organization		3	15	5
Hold office in nursing group		4	20	1

	Mean	Rank-place*
Age	30.3	1
Age on completion of basic nursing education program	23.9	5
Age when married	27.3	5
Age when joined CF	23.9	3

* Rank-place among career pattern groups

2. In comparison with other groups, there are fewer military nurses married (65%) and the percentage of spouses in the CF is also the lowest (30%). Furthermore, on average they got married at a later age (27.3 years).

3. Seventy-five percent of the group are Lieutenants or Junior Captains and they have the lowest average age (30.3 years) of all groups.

4. In comparison with the respondents of other groups, the stationary place-bound group has the highest rate (20%) of holding office in a nursing group and the lowest one (15%) to hold office in community organizations.

5. The majority of the respondents (65%) have always worked in the same area of practice.

Overall, the stationary place-bound careerist is a female who has completed her basic education program at almost age 24 and joined the CF at about the same time. Half of her group (50%) has graduated with a baccalaureate degree in nursing, and 25% enrolled in advanced education. Fifty percent have already completed a specialty clinical nursing course and most are still working in the same area of practice. She was 27 years old when she got married, her husband is not in the CF, and probably they do not have any children. She may work for a community organization as a volunteer, but it is unlikely that she holds office.

Career Pattern 2 - Mobile Lateral

This larger group of 50 members (43 females and 7 males) has worked in more than one health care institution but always at the staff nurse/team leader level. When compared with the other four career pattern groups, these respondents presented few distinguishing traits apart from their career pattern (Table 78):

1. They are the youngest group to get married (on average of 24.1 years) and are the group with the highest marriage rate (74%).

2. There is a higher proportion of Captains with more than 4 years and less than 12 years in the rank.

3. Almost half of the group (46%) is involved in a community organization.

Table 78
Education, Demographic, and Work History of the Mobile Lateral Careerist

Characteristic		Career Pattern Mobile Lateral n = 50 f	%	Rank-place*
Basic Nursing Program: Hospital diploma		19	38	3
	College diploma	14	28	3
	Baccalaureate degree	17	34	2
Highest level of education: RN		26	52	3
	Baccalaureate degree	24	48	3
	Master's degree	--	--	--
Enrolled in advance education		12	24	3
Completed a specialty clinical nursing program		41	82	4
Can recall decision to become a nurse		41	82	3
Have always worked in the same area of practice		15	30	3
Gender:	Female	43	86	2
	Male	7	14	4
Married (includes widowed or divorced)		37	74	1
Have children		19	36	4
Spouse in the CF		19	38	2
Rank:	Lieutenant & Captain > 4 years	22	44	3
	Captain ≥ 4 years, < 12 years	21	42	1
	Capt ≥ 12 years	7	14	4
	Major & Above	--	--	--
Involved in community organization		23	46	1
Hold office in community organization		16	32	2
Hold office in nursing group		3	6	4

	Mean	Rank-place
Age	33.2	2
Age on completion of basic nursing education program	22.8	4
Age when married	24.1	1
Age when joined CF	23.4	2

* Rank-place among career pattern groups

Overall, in the mobile lateral group there is a higher proportion (28%) of graduated nurses from a hospital school of nursing and a lower highest completed level of education for baccalaureate degrees (48%) than the stationary place-bound. The majority (82%) has completed a specialty clinical nursing program and only 30% still working in the same area of practice. There is a higher proportion (42%) of Captains $\geq$ 4 years and $<$ 12 years in the rank than stationary place-bound careerists. The average age of this group is higher than the stationary place-bound group (33.2 years).

Career Pattern 3 - Advancing Place-Bound

This group consisted of 12 respondents (9 females and 3 males) who have always worked in the same health care institution but have moved upwardly within the institution. In this group, 33.3% were staff nurse/team leaders, 25% head nurses/officers in charge/senior nursing officers, and 41.6% held other positions in the same institution (Table 79).

1. This group has the highest proportion of college graduates (50%). The highest completed level of education is a RN diploma (66.7%), and the lowest is a baccalaureate degree (33.3%).

2. Two thirds of the group are enrolled in advanced education and 91.7% have completed at least one specialty clinical nursing program.

3. They have the lowest (75%) recollection of the decision to become a nurse.

4. The highest percentage of males (25%) and the lowest proportion of females (75%) is found in this group. They are the youngest group, on average, to join the CF (22.75 years).

5. Half of the married military nurses have a spouse in the CF, and they are the least likely to have children.

6. They are also the least likely to be involved in a community organization.

Table 79
Education, Demographic, and Work History of the Advancing Place-Bound Careerist

Characteristic		Career Pattern Advancing Place-Bound n = 12 f	%	Rank-place*
Basic Nursing Program: Hospital diploma		4	33.3	4
	College diploma	6	50	1
	Baccalaureate degree	2	16.7	4
Highest level of education: RN		8	66.7	1
	Baccalaureate degree	4	33.3	5
	Master's degree	--	--	--
Enrolled in advance education		8	66.6	1
Completed a specialty clinical nursing program		11	91.7	1
Can recall decision to become a nurse		9	75	5
Have always worked in the same area of practice		4	33.3	2
Gender:	Female	9	75	5
	Male	3	25	1
Married (includes widowed or divorced)		8	66.6	4
Have children		3	25	5
Spouse in the CF		6	50	1
Rank:	Lieutenant & Captain < 4 years	6	50	2
	Captain ≥ 4 years, <12 years	3	25	4.5
	Captain ≥ 12 years	3	25	3
	Major & Above	--	--	--
Involved in community organization		2	16.6	5
Hold office in community organization		2	16.6	4
Hold office in nursing group		1	8.3	3

	Mean	Rank-place
Age	35.2	3
Age on completion of basic nursing education program	22.4	3
Age when married	25.25	2
Age when joined CF	22.75	1

* Rank-place among career pattern groups

Overall, the advancing place-bound careerists completed their education on average at 22.4 years of age and only two nurses obtained a BN. Additionally, two other nurses upgraded their education to complete a baccalaureate degree. This group, on average, has joined the CF at the earliest age and as the group gets older (35.2 years), the rank structure modifies slightly and there is an equal proportion of Captain $\geq$ 4 years $<$ 12 years and Captain $\geq$ 12 years. These nurses are not likely to be involved in a community organization and, if they are, they will hold office in such an organization.

Career Pattern 4 - Mobile Reverting Career

This career pattern consists of 43 participants (38 females and 5 males). They have worked in more than one institution, at several position levels, but at the time of the survey were working as a staff nurse/team leader. This group is considered mobile reverting due to the present reverse position in their career. Table 80 presents the findings for this group. Unique features of the mobile reverting careerist are:

1. This group represents the highest proportion of females (88.4%) for the population and the lowest portion of male nurses (11.6%).

2. Compared with other groups, they have the smallest number enrolled in advanced education.

3. They have the highest percentage (45.2%) of children.

4. They were the oldest nurses (24.6 years) to join to the CF, and at the average age of 39.5 years they have the highest proportion of Captains $\geq$ 12 years in the rank.

5. They are the least likely to hold a position (2.3%) in a nursing group.

Overall, the mobile reverting careerist is a military nurse who has adopted this pattern for different reasons. For some it is a requirement of the CF; for others it is the demands of the family or for personal reasons.

Table 80
Education, Demographic, and Work History of the Mobile Reverting Careerist

Characteristic		Career Pattern Mobile Reverting n = 43 f	%	Rank-place*
Basic Nursing Program: Hospital diploma		20	46.5	2
	College diploma	12	27.9	4
	Baccalaureate degree	11	25.6	3
Highest level of education: RN		24	55.8	2
	Baccalaureate degree	19	44.2	4
	Master's degree	--	--	--
Enrolled in advance education		8	18.6	5
Completed a specialty clinical nursing program		37	86.0	3
Can recall decision to become a nurse		31	75.6	4
Have always worked in the same area of practice		9	20.9	4
Gender:	Female	38	88.4	1
	Male	5	11.6	5
Married (includes widowed or divorced)		31	72.1	3
Have children		19	45.2	1
Spouse in the CF		13	30.3	4
Rank:	Lieutenant & Captain < 4 years	7	16.3	4
	Captain ≥ 4 years, < 12 years	18	41.9	2
	Captain ≥ 12 years	18	41.9	1
	Major & Above	--	--	--
Involved in community organization		16	37.2	4
Hold office in community organization		13	30.2	3
Hold office in nursing group		1	2.3	5

	Mean	Rank-place
Age	39.5	4
Age on completion of basic nursing education program	21.8	2
Age when married	26.4	3
Age when joined CF	24.6	5

* Rank-place among career pattern groups

Career Pattern 5 - Mobile Advancing

The mobile advancing group consists of 117 nursing officers (98 females and 19 males) who have worked in more than one health care institution, at more than one position level, and appear to have advanced continously up the professional ladder (Table 81). Unique features are:

1. These nurses have completed their basic nursing education on average at the age of 21.8 years, and two thirds have obtained a RN diploma from a hospital school of nursing. They have the lowest proportion of nurses whose basic nursing education is from a college or faculty of nursing. However, they have the lowest rate of RN as the highest completed level of education with some having pursued graduate studies to a Master's degree (6.0%)

2. They have the highest proportion of nurses who recall the decision to become a nurse, and only 17.9 % are still working in the same area of practice.

3. All of the Majors and above ranks are found in this group, and it has the lowest percentage of Lieutenants and Junior Captains. The oldest average age of the entire group is 41.6 years.

4. Thirty-four percent of the group hold office in a community organization.

Overall, these careerists have upgraded their basic RN diplomas to undergraduate and graduate studies. They are the second largest group (90.6%) to have completed at least one specialty clinical nursing program.

They are also the second highest group to be married and have children. They appeared to be quite involved in community organizations (41.%) and have also held office in a nursing group (15.4%). The average age (41.6 years) for the group may explain the difference in the rank structure. All the Majors and above ranks are in this group, a high proportion (36.8%) of Captains $\geq$ 12 years in the rank, and only a small number of Lieutenants and Junior Captains (10.3%). With more time in the CF, they have been relocated more often, two to fourteen times, and have had a chance to be subsidized for advanced education and to have completed more specialty clinical nursing programs.

Table 81
Education, Demographic, and Work History of the Mobile Advancing Careerist

Characteristic		Career Pattern Mobile Advancing n = 117 f	%	Rank-place*
Basic Nursing Program: Hospital diploma		78	66.7	1
	College diploma	20	17.1	5
	Baccalaureate degree	19	16.2	5
Highest level of education: RN		49	41.9	5
	Baccalaureate degree	61	52.1	2
	Master's degree	7	6.0	1
Enrolled in advance education		26	22.2	4
Completed a specialty clinical nursing program		106	90.6	2
Can recall decision to become a nurse		104	88.9	1
Have always worked in the same area of practice		21	17.9	5
Gender:	Female	98	83.8	4
	Male	19	16.2	2
Married (includes widowed or divorced)		85	72.6	2
Have children		48	43.2	2
Spouse in the CF		37	31.9	3
Rank:	Lieutenant & Captain < 4 years	12	10.3	5
	Captain ≥ 4 years, < 12 years	37	31.6	3
	Capt ≥ 12 years	43	36.8	2
	Major & Above	25	21.4	1
Involved in community organization		48	41.0	2
Hold office in community organization		40	34.2	1
Hold office in nursing group		18	15.4	2

	Mean	Rank-place
Age	41.6	5
Age on completion of basic nursing education program	21.8	1
Age when married	26.6	4
Age when joined CF	24.3	4

* Rank-place among career pattern groups

Characteristics of the Career Patterns in Terms of Career Orientations

The career patterns were then analyzed in terms of the career orientations identified in the factor analysis of the data from Part II: Career Orientations Inventory. The mean factor scores for each career orientation were given a descriptive value label from "not important" to "very important."

Stationary place-bound careerists. Table 82 shows that within the stationary place-bound group, autonomy, with a mean factor of 3.29 (SD = .35), ranks highest of all the career orientations. Except for the last career orientation, professional integrity, which is "somewhat important," all of the other orientations are valued as "important" for the group.

Table 82
Rank Order, Mean Factor Scores, and Mean Range Value for Career Orientations of the Stationary Place-Bound Careerists

	Career Pattern Stationary Place-Bound Careerists		
Orientation	Rank	Mean	Range Value
Ambition for leadership	7	2.75	important
Family commitment	3	3.11	important
Autonomy	**1**	**3.29**	important
Self-esteem	2	3.18	important
Technical competence	5	2.96	important
Variety/adventure	6	2.95	important
Job security	4	3.08	important
Professional integrity	8	2.16	somewhat important

Mobile lateral careerists. The findings presented in show that the mean factor score of autonomy (M = 3.37, SD = .47) again ranks first and professional integrity last. All career orientations except for professional integrity are valued as "important."

Table 83

Rank Order, Mean Factor Scores, and Mean Range Value for Career Orientations of the Mobile Lateral Careerists

Orientation	Career Pattern Mobile Lateral Careerists Rank	Mean	Range Value
Ambition for leadership	7	2.61	important
Family commitment	5	3.01	important
Autonomy	1	3.37	important
Self-esteem	2	3.26	important
Technical competence	6	2.91	important
Variety/adventure	4	3.08	important
Job security	3	3.18	important
Professional integrity	8	2.18	somewhat important

Advancing place-bound. Table 84 shows that within the advancing place-bound careerists, variety/adventure (M = 3.31, SD = .57) ranks first. Family commitment (M = 2.52, SD = .81) and professional integrity (M = 2.30, SD = .51) rank in the last two positions. The rank ordering for technical competence, job security, and professional integrity is identical to the stationary place-bound careerists.

Mobile reverting careerists. As shown in Table 85, the mean factor score for autonomy group (M = 3.45, SD = .46) ranks first, followed by self-esteem (M = 3.27, SD = .48). Rank ordering of the mobile reverting group is identical to the mobile lateral group.

Table 84

Rank Order, Mean Factor Scores, and Mean Range Value for Career Orientations of the Advancing Place-Bound Careerists

Orientation	Career Pattern: Advancing Place-Bound Careerists		
	Rank	Mean	Range Value
Ambition for leadership	6	2.68	important
Family commitment	7	2.52	important
Autonomy	3	3.13	important
Self-esteem	2	3.24	important
Technical competence	5	2.94	important
Variety/adventure	1	**3.31**	important
Job security	4	3.00	important
Professional integrity	8	2.30	somewhat important

Table 85

Rank Order, Mean Factor Scores, and Mean Range Value for Career Orientations of the Mobile Reverting Careerists

Orientation	Career Pattern: Mobile Reverting Careerists		
	Rank	Mean	Range Value
Ambition for leadership	7	2.60	important
Family commitment	5	2.99	important
Autonomy	1	**3.45**	important
Self-esteem	2	3.27	important
Technical competence	6	2.95	important
Variety/adventure	4	3.01	important
Job security	3	3.16	important
Professional integrity	8	2.23	somewhat important

Mobile advancing careerists. In Table 86, self-esteem ranks in the first place (M = 3.41, SD = .40), while autonomy is second (M = 3.35, SD = .47). Variety/adventure, job security, and professional integrity are ranked the same as by the mobile lateral and mobile reverting careerists.

Table 86

Rank Order, Mean Factor Scores, and Mean Range Value for Career Orientations of the Mobile Advancing Careerists

	Career Pattern Mobile Advancing Careerists		
Orientation	Rank	Mean	Range Value
Ambition for leadership	6	2.83	important
Family commitment	7	2.72	important
Autonomy	2	3.35	important
Self-esteem	**1**	**3.41**	important
Technical competence	5	3.03	important
Variety/adventure	4	3.04	important
Job security	3	3.21	important
Professional integrity	8	2.26	somewhat important

In summary, a profile for each of the five career pattern groupings has been identified from the analysis of the career history variables. Typically, the stationary place-bound careerists are likely to be Lieutenants or Junior Captains, 30 years old, who had earned a baccalaureate in nursing as the basic nursing education program but have not upgraded their basic nursing education yet. They have always worked in the same area of nursing practice and hold an office in a nursing group. However, the mobile lateral careerists are Captains $\geq 4 \leq 12$ years in the rank who were the youngest to get married and the most married careerists. They are quite involved in community organizations.

The advancing place-bound careerists never upgraded their RN diploma obtained from a college of nursing but they are now enrolled in advanced education. Almost all

of them completed a specialty clinical nursing program. The highest proportion of male nurses is found in this . Half of the careerists have a spouse in the CF. They were the youngest to join the CF.

The mobile reverting careerists are likely to be Captains ≥ 12 years in the rank, female, and have the highest proportion of children.

The mobile advancing careerists can recall the decision for becoming a nurse, graduated from a hospital school of nursing at the average age of 21.8 years, and upgraded their basic nursing education program to a baccalaureate or master's degree. They hold office in community organizations. All the Majors and above ranks were found in this career pattern.

Career orientation factors and career patterns were then discussed within the career pattern groups. Except for professional integrity, which was rated "somewhat important" by the military nurses, all other career orientations are "important" to all career pattern groups. Within the career pattern groups, autonomy and self-esteem always rank in the top three positions of all the career orientations. Mobile advancing careerists presented the most differences on the career orientations when compared to the other four pattern groups. They have the highest mean factor scores on ambition for leadership, self-esteem, technical competence, and job security.

Relationship Between Career History Characteristics and Adult Life Cycle

Adult Life Cycle

Adult life cycle refers to the stages that people experience in life and when pursuing a career (Levinson et al., 1978).

Exploration period. In this period between the ages of 16-29 years, individuals usually leave school, start a first job, and begin to develop career expectations. Forty-two military nurses were in this period (M = 27 years, SD = 1.5) (Table 87).

Establishment period. In this phase between the ages of 30-45 years, people reach their career peak, develop a high level of competence at work, and achieve greater authority, independence, and self-sufficiency. One hundred forty-three nurses were in this phase (M = 37 years, SD = 4.9).

Maintenance period. After age 45, innovation or stagnation is the expected norm in career development. It may also be a time when individuals try to make changes to enrich their lives within their limitations. Fifty-eight military nurses were located in this period (M = 49 years, SD = 2.2).

Table 87
Age of Respondents in Adult Life Cycle Period

Age	Exploration		Establishment		Maintenance	
	N	%	N	%	N	%
16-29	42	17.3	--	--	--	--
30-45	--	--	143	58.8	--	--
46 +	--	--	--	--	58	23.9

Relationship Between Rank Structure and Adult Life Cycle

As this study was conducted with CF military nurses, the variable of the rank hierarchy was studied in relation to the adult life cycle. Figure 2 details the distribution of rank in the different adult life cycle phases. Thirty-seven (59.6%) Lieutenants and Junior Captains are in the exploration phase, while 25 (40.3%) are in the establishment period.

Five Captains (6%) with more than 4 years in the rank are located in the exploration period, while the majority (71 nurses or 84.5%) are situated in the establishment phase. Only eight or 9.5% are in the maintenance period. Captains with more than 12 years in the rank are almost equally divided between the establishment and the maintenance phase. Likewise, Majors and above ranks are in the same period.

RANK

Major & Above	0	**8**	**17**
Captain ≥ 12 years	0	**39**	**33**
Captain ≥ 4 < 12 years	**5**	**71**	**8**
Lieutenant & Captain < 4 years	**37**	**25**	0
	Exploration age ≤ 29	Establishment age ≥ 30 ≤ 45	Maintenance age 46 +

LIFE CYCLE PHASE

Figure 2. Relationship of Military Nurses Rank Structure and Adult Life Cycle.

A description of the characteristics for each rank grouping according to the different adult life cycle phase is presented below. It includes education, community and professional involvement, work history, and demographic information. The table for each grouping includes the group size, frequency, appropriate mean, and the position (rank-place) from 1 to 9 that the rank grouping and adult life cycle holds vis-à vis the other eight groups for each variable.

Life Achievements of the Lieutenant & Captain < 4 Years in the Exploration Phase. This group consisted of 37 respondents (32 females and 5 males) who are under 30 years of age. Table 88 presents their particular traits:

Table 88
Life Achievements of the Lieutenant & Captain < 4 Years in the Exploration Phase

Variable	Exploration Phase n = 37 f	%	Rank-Place *
Basic Nursing Education: RN diploma	11	29.7	9
Baccalaureate degree	26	70.3	1
Highest completed level of education: RN diploma	9	24.3	7
Baccalaureate degree	28	75.7	2
Master's degree	--	--	
Enrolled in advanced education	7	18.9	6
Completed a specialty clinical nursing program	22	59.5	9
Involved in community organization	11	29.7	7
Hold position in community organization	5	13.5	8
Hold position in nursing group	6	16.7	4
Number of agencies prior to joining the CF: None	22	59.5	2
One or more	15	41.5	8
Position in the CF:			
Staff Nurse/Team Leader	31	83.8	1
Head Nurse/Officer in Charge/Senior Nursing Officer	2	5.4	8
Manager	1	2.7	5
Outside of occupation	--	--	8
Other	3	8.1	8
Have always worked in the same area of practice	23	62.2	1
Gender: Male	5	13.5	4
Female	32	86.5	6
Married (includes divorced & separated)	23	62.2	7
Importance of career: My own	2	5.4	9
My spouse/partner	6	16.2	2
Equally important	15	40.5	1
Have children	8	21.6	7
Career progressing according to expectations	22	59.5	5

	Mean	Rank-Place
Age on completion of basic nursing education program	21.9	5
Age when joined CF	20.6	2
Age when first married	23.9	2

* Rank-place among the adult life cycle according to the rank grouping.

1. The military nurses in this group have the highest proportion (70.3%) of Baccalaureate degrees for the basic nursing education program. They have the lowest rate (59.5%) of a completed specialty clinical nursing program.

2. The majority (83.8%) were working in a staff nurse/team leader position in the same area of nursing practice (62.2%).

3. The careers of their spouse/partner were stated as being equally important (40.5%) to their own careers. However, they have the lowest rate affirming the importance of their own careers (5.4%) .

Overall, the age of these military nurses at completion of the basic nursing program was 21.9 years. Two of them upgraded the RN diploma to a Baccalaureate degree while seven others are enrolled in advanced education. Almost two thirds are married but only 21.6% have children. Less than 30% are involved in a community organization.

Life Achievements of the Captain $\geq$ 4 Years & $<$ 12 Years in the Exploration Phase. Due to their age (less than 30 years), this much smaller group of five female Nursing Officers is still in the exploration phase. Table 89 presents a few distinguishing traits of this group:

1. This group was the youngest to join the CF at 19.4 years of age, and for most of them the CF was their first employer.

2. They all have completed at least one specialty clinical nursing program.

3. They are the least likely (20%) to be involved in a community organization but they have the highest rate (20%) of holding office in a nursing group.

4. In spite of saying that their careers are as important as the careers of their spouse/partner, they all stated that their careers are progressing according to their expectations.

5. They were the youngest group to get married at the average age of 23.3 years.

Overall, these military nurses never upgraded their basic nursing education and only one is enrolled in an advanced education program. The position they occupy in nursing practice is mainly (60%) as staff nurse/team leader. Most of them (80%) are married and only 20% have children.

Table 89
Life Achievements of the Captain ≥ 4 < 12 Years in the Exploration Phase

Variable	Exploration Phase n = 5		
	f	%	Rank-Place *
Basic Nursing Education: RN diploma	2	40	8
Baccalaureate degree	3	60	2
Highest completed level of education: RN diploma	2	40	6
Baccalaureate degree	3	60	3
Master's degree	--	--	--
Enrolled in advanced education	1	20	5
Completed a specialty clinical nursing program	5	100	2
Involved in community organization	1	20	9
Hold office in community organization	1	20	7
Hold position in nursing group	1	20	1
Number of agencies prior to joining the CF: None	4	80	1
One or more	1	20	9
Position in the CF:			
Staff Nurse/Team Leader	3	60	3
Head Nurse/Officer in Charge/Senior Nursing Officer	1	20	7
Manager	--	--	7.5
Outside of occupation	--	--	8
Other	1	20	4
Have always worked in the same area of practice	1	20	4
Gender: Male	--	--	8
Female	5	100	2
Married (includes divorced & separated)	4	80	2
Importance of career: My own	1	20	5.5
My spouse/partner	1	20	1
Equally important	2	40	2
Have children	1	20	8
Career progressing according to expectations	5	100	1.5

	Mean	Rank-Place
Age on completion of basic nursing education program	21	3
Age when joined CF	19.4	1
Age when first married	23.3	1

* Rank-place among the adult life cycle according to the rank grouping.

Life Achievements of the Lieutenant & Captain < 4 Years in the Establishment Phase. This larger group of 25 military nurses presented the highest proportion of male (28%) and the lowest proportion of female (72%) nurses between the ages of 30 and 45 years. When compared to other groups, the respondents presented these unique features (Table 90):

1. On average, they were the oldest to complete the basic nursing education program (24.5 years). This group has the highest rate of nurses enrolled in advanced education.

2. They have the lowest proportion of nurses in head nurse positions with none being employed as a manager or outside of the nursing occupation.

Overall, the majority of them (64%) graduated with a RN diploma. Few upgraded their basic nursing education program (44%) to a Baccalaureate degree, but 88% have completed at least one specialty clinical nursing program. They are employed in a staff nurse/team leader position. Most of them have been married (72%) and 40% have children.

Life Achievements of the Captain ≥ 4 Years & < 12 Years in the Establishment Phase. This is the largest group of military nurses (n = 71). The unique features of this group are that they have the highest rate of married military nurses and the highest rate of having children (Table 91).

Overall, these nurses are between the ages of 30 and 45 years and completed their basic level of nursing education at 22 years of age. Slowly they worked at upgrading their basic nursing education, and 22 of them are enrolled in advanced education. Half of them (n = 36) are involved in community activities and one third (n=25) hold office in such organizations. These military nurses are employed in all positions in the CF. Twenty-five of them (35.2%) said that their careers were equally important to their spouse/partner's career and 54.9% stated that their careers were progressing according to their expectations.

Table 90
Life Achievements of the Lieutenant & Captain < 4 Years in the Establishment Phase

Variable	Establishment Phase n = 25 f	%	Rank-Place *
Basic Nursing Education: RN diploma	16	64	7
Baccalaureate degree	9	36	3
Highest completed level of education: RN diploma	14	56	4
Baccalaureate degree	11	44	6
Master's degree	--	--	--
Enrolled in advanced education	8	32	1
Completed a specialty clinical nursing program	22	88	6
Involved in community organization	11	44	3
Hold office in community organization	8	32	4
Hold position in nursing group	2	8	8
Number of agencies prior to joining the CF: None	6	24	3
One or more	19	76	7
Position in the CF:			
Staff Nurse/Team Leader	17	68	2
Head Nurse/Officer in Charge/Senior Nursing Officer	1	4	9
Manager	--	--	7.5
Outside of occupation	--	--	8
Other	7	28	3
Have always worked in the same area of practice	9	36	2
Gender: Male	7	28	1
Female	18	72	9
Married (includes divorced & separated)	18	72	5
Importance of career: My own	5	20	5.5
My spouse/partner	1	4	6
Equally important	9	36	3
Have children	10	40	4
Career progressing according to expectations	17	68	4

	Mean	Rank-Place
Age on completion of basic nursing education program	24.5	9
Age when joined CF	25.8	8
Age when first married	26.4	4

* Rank-place among the adult life cycle according to the rank grouping.

Table 91
Life Achievements of the Captain ≥ 4 < 12 Years in the Establishment Phase

Variable	Establishment Phase n = 71 f	%	Rank-Place *
Basic Nursing Education: RN diploma	53	74.6	5
Baccalaureate degree	18	25.4	5
Highest completed level of education: RN diploma	43	60.6	2
Baccalaureate degree	28	39.4	8
Master's degree	--	--	--
Enrolled in advanced education	22	31.0	2
Completed a specialty clinical nursing program	61	84.5	7
Involved in community organization	36	50.7	2
Hold office in community organization	25	35.2	3
Hold position in nursing group	6	8.5	7
Number of agencies prior to joining the CF: None	17	23.9	4
One or more	54	76.1	6
Position in the CF:			
Staff Nurse/Team Leader	36	50.7	4
Head Nurse/Officer in Charge/Senior Nursing Officer	16	22.5	6
Manager	2	2.8	4
Outside of occupation	6	8.5	5
Other	11	15.5	5
Have always worked in the same area of practice	13	18.3	5
Gender: Male	9	12.7	5
Female	62	87.3	5
Married (includes divorced & separated)	60	84.5	1
Importance of career: My own	19	26.8	3
My spouse/partner	8	11.3	4
Equally important	25	35.2	4
Have children	40	56.3	1
Career progressing according to expectations	39	54.9	8

	Mean	Rank-Place
Age on completion of basic nursing education program	22	6
Age when joined CF	23.5	3.5
Age when first married	25.6	3

* Rank-place among the adult life cycle according to the rank grouping.

Life Achievements of the Captain ≥ 12 Years in the Establishment Phase. This group consists of 39 military nurses (30 females and 9 males) aged 30 to 45 years. Table 92 presents the findings for this group:

1. They have the largest portion of nurses being employed in different positions in the nursing occupation.

2. They have the highest rate (31.6%) of nurses stating that their own careers are important.

3. They have the lowest rate of holding a position in a nursing group.

Overall, the military nurses in this group completed their basic nursing education program at age 22.1 years, and the group is divided between 66.6% with a RN diploma and 33.3% with a Baccalaureate degree. Almost one-third are enrolled in advanced education and 94.9% have already completed a specialty clinical nursing program. The majority (94.9%) joined the CF with previous experience. Thirty percent are involved in community organizations, and they all hold offices in such organizations. Although they got married at a later age (27.2 years) than the previous group, 43.5% have children.

Life Achievements of the Major & Above Ranks in the Establishment Phase. This younger group of eight female Majors and above ranks presents more highlights than the other groupings (Table 93): ,

1. All have a baccalaureate degree as their highest completed level of education, and none of them are presently enrolled in advanced education. However, all of them have completed a specialty clinical nursing program.

2. All had previous experience prior to joining the CF. None are in staff nurse/team leader positions, but 37.5% are in head nurse or manager positions. Twenty-five percent are employed out of nursing but as a Staff Officer in the CF.

3. They have the lowest rate (12.5%) of having children.

Table 92
Life Achievements of the Captain ≥ 12 Years in the Establishment Phase

Variable	Establishment Phase n = 39 f	%	Rank-Place *
Basic Nursing Education: RN diploma	26	66.7	6
Baccalaureate degree	13	33.3	4
Highest completed level of education: RN diploma	21	53.8	5
Baccalaureate degree	18	46.2	5
Master's degree	--	--	--
Enrolled in advanced education	12	30.8	3
Completed a specialty clinical nursing program	37	94.9	4
Involved in community organization	12	30.8	6
Hold office in community organization	12	30.8	5
Hold position in nursing group	3	7.7	9
Number of agencies prior to joining the CF: None	2	5.1	6
One or more	37	94.9	4
Position in the CF:			
Staff Nurse/Team Leader	10	25.6	6
Head Nurse/Officer in Charge/Senior Nursing Officer	12	30.8	4
Manager	--	--	7.5
Outside of occupation	2	5.1	6
Other	15	38.5	1
Have always worked in the same area of practice	6	15.4	6
Gender: Male	9	23.1	2
Female	30	76.9	8
Married (includes divorced & separated)	30	76.9	3
Importance of career: My own	12	31.6	1
My spouse/partner	4	10.5	5
Equally important	10	31.6	5
Have children	17	43.5	3
Career progressing according to expectations	23	59.0	6

	Mean	Rank-Place
Age on completion of basic nursing education program	22.1	7
Age when joined CF	24	5.5
Age when first married	27.2	5

* Rank-place among the adult life cycle according to the rank grouping.

Table 93
Life Achievements of the Major & Above Ranks in the Establishment Phase

Variable	Establishment Phase n = 8		
	f	%	Rank-Place *
Basic Nursing Education: RN diploma	7	87.5	3.5
Baccalaureate degree	1	12.5	6.5
Highest completed level of education: RN diploma	--	--	9
Baccalaureate degree	7	87.5	1
Master's degree	1	12.5	2
Enrolled in advanced education	--	--	9
Completed a specialty clinical nursing program	8	100	2
Involved in community organization	3	37.5	5
Hold office in community organization	--	--	9
Hold position in nursing group	1	12.5	5.5
Number of agencies prior to joining the CF: None	--	--	8
One or more	8	100	2
Position in the CF:			
Staff Nurse/Team Leader	--	--	8.5
Head Nurse/Officer in Charge/Senior Nursing Officer	3	37.5	1.5
Manager	3	37.5	1
Outside of occupation	2	25	1.5
Other	--	--	9
Have always worked in the same area of practice	1	12.5	7.5
Gender: Male	--	--	8
Female	8	100	2
Married (includes divorced & separated)	5	62.5	6
Importance of career: My own	1	12.5	8
My spouse/partner	1	12.5	3
Equally important	2	25	6.5
Have children	1	12.5	9
Career progressing according to expectations	7	87.5	3

	Mean	Rank-Place
Age on completion of basic nursing education program	20.9	2
Age when joined CF	23.5	3.5
Age when first married	27.8	7

* Rank-place among the adult life cycle according to the rank grouping.

Overall, these military nurses completed their basic nursing education at age 20.9 years and have upgraded their nursing education program to a baccalaureate or master's degree. Some of them are involved in a community organization but none of them are holding a position in such an organization. They joined the CF relatively early (23.5 years of age) and most of them (87.5%) comment that their career is progressing according to their expectations. Twenty-five percent state that their careers are equally important to their spouse/partner's career.

Life Achievements of the Captain $\geq$ 4 Years & $<$ 12 Years in the Maintenance Phase. This group of eight female Nursing Officers are over 46 years of age (Table 94). They joined the CF at an average age of 29.8 years and, when compared to other groupings, presented the following characteristics:

1. Nobody in this group has upgraded her basic level of nursing education. This group has the highest proportion (87.5%) of RN diplomas and the lowest rate (12.5%) of Baccalaureate degrees as the highest completed level of nursing education.

2. Seventy-five percent of them are involved in community organizations and 50% are holding office in such organizations.

3. All had previous experience prior to joining the CF at the average age of 29.8 years. They are mainly employed in a Head Nurse position (37.5%) and outside of the nursing occupation (37.5%). None of them is in a manager position.

4. None of them stated that the career of the spouse is important. Only three NOs stated that their careers were progressing according to their expectations.

Overall, in spite of not having already upgraded their basic nursing education, 25% of them are enrolled in advanced education and 62.5% have completed a specialty clinical nursing program. One quarter of them are still working in a staff nurse/team leader position. Seventy-five percent are or were previously married and 50% have children.

Table 94
Life Achievements of the Captain ≥ 4 < 12 Years in the Maintenance Phase

Variable	Maintenance Phase n = 8		
	f	%	Rank-Place *
Basic Nursing Education: RN diploma	7	87.5	3.5
Baccalaureate degree	1	12.5	6.5
Highest completed level of education: RN diploma	7	87.5	1
Baccalaureate degree	1	12.5	9
Master's degree	--	--	--
Enrolled in advanced education	2	25	4
Completed a specialty clinical nursing program	5	62.5	8
Involved in community organization	6	75	1
Hold office in community organization	4	50	1
Hold position in nursing group	1	12.5	5.5
Number of agencies prior to joining the CF: None	--	--	8
One or more	8	100	2
Position in the CF:			
Staff Nurse/Team Leader	2	25	7
Head Nurse/Officer in Charge/Senior Nursing Officer	3	37.5	1.5
Manager	--	--	7.5
Outside of occupation	2	25	1.5
Other	1	12.5	6.5
Have always worked in the same area of practice	1	12.5	7.5
Gender: Male	--	--	8
Female	8	100	2
Married (includes divorced & separated)	6	75	4
Importance of career: My own	2	25	4
My spouse/partner	--	--	8.5
Equally important	2	25	6.5
Have children	4	50	2
Career progressing according to expectations	3	37.5	9

	Mean	Rank-Place
Age on completion of basic nursing education program	23.4	8
Age when joined CF	29.8	9
Age when first married	27.5	6

* Rank-place among the adult life cycle according to the rank grouping.

Life Achievements of the Captain ≥ 12 Years in the Maintenance Phase. Thirty-two Nursing Officers (26 females and 6 males) comprised this grouping aged 46 years and over. They are the largest group in this phase. Few traits characterize this group (Table 95):

1. All had previous experience prior to joining the CF.

2. They are the oldest group to get married (29.1 years of age) and the least married group (56.3%).

3. They are the least likely to state that their careers are not equally important as their spouse/partner's career.

Overall, a large proportion of this group worked at upgrading their level of basic education to a baccalaureate degree. Military nurses are quite involved in community organizations (40.6%) and they hold office (40.6%) in such organizations. Nursing Officers are found in all position levels in the CF, and 21.9% are still working in the same area of nursing practice. Being married at the highest average age and having children (34.3%) does not seem to interfere with the way that their career is progressing as stated by most of them (56.3%).

Life Achievements of the Major & Above Ranks in the Maintenance Phase. This larger group of Majors and above ranks consisted of 17 respondents aged over 46 years. Table 96 presents findings for this group:

1. All nurses in this group graduated with a RN diploma as their basic nursing education at the average age of 20.8 years. Most of them have upgraded their basic level of nursing education to a baccalaureate or master's degree. All have completed at least one specialty clinical nursing program. None of them are working in a staff nurse/team leader position nor do they work in the same area of nursing practice.

2. None stated that the career of their spouse/partner is important, and all perceived that their careers are progressing according to their expectations.

Overall, these military nurses joined the CF at the average age of 24 years and most had previous experience. Almost 30% are involved in community activities and 18.8% hold offices. Almost 60% of them were married at the average age of 28.1 years and only 23.5% of them have children.

Table 95
Life Achievements of the Captain ≥ 12 Years in the Maintenance Phase

Variable	Maintenance Phase n = 32 f	%	Rank-Place *
Basic Nursing Education: RN diploma	30	94.7	2
Baccalaureate degree	2	6.3	8
Highest completed level of education: RN diploma	18	56.3	3
Baccalaureate degree	14	43.8	7
Master's degree	--	--	--
Enrolled in advanced education	4	12.5	8
Completed a specialty clinical nursing program	29	90.7	5
Involved in community organization	13	40.6	4
Hold office in community organization	13	40.6	2
Hold position in nursing group	6	18.8	2.5
Number of agencies prior to joining the CF: None	--	--	8
One or more	32	100	2
Position in the CF:			
Staff Nurse/Team Leader	9	28.1	5
Head Nurse/Officer in Charge/Senior Nursing Officer	11	34.4	3
Manager	2	6.3	3
Outside of occupation	6	18.8	3
Other	4	12.5	6.5
Have always worked in the same area of practice	7	21.9	3
Gender: Male	6	18.8	3
Female	26	82.2	7
Married (includes divorced & separated)	18	56.3	9
Importance of career: My own	6	18.8	7
My spouse/partner	1	3.1	7
Equally important	7	21.9	9
Have children	11	34.3	5
Career progressing according to expectations	18	56.3	7

	Mean	Rank-Place
Age on completion of basic nursing education program	21.7	4
Age when joined CF	24.3	7
Age when first married	29.1	9

* Rank-place among the adult life cycle according to the rank grouping.

Table 96
Life Achievements of the Major & Above Ranks in the Maintenance Phase

Variable	Maintenance Phase n = 17 f	%	Rank-Place *
Basic Nursing Education: RN diploma	17	100	1
Baccalaureate degree	--	--	9
Highest completed level of education: RN diploma	1	5.9	8
Baccalaureate degree	10	58.8	4
Master's degree	6	35.6	1
Enrolled in advanced education	3	17.6	7
Completed a specialty clinical nursing program	17	100	2
Involved in community organization	5	29.4	8
Hold office in community organization	5	29.4	6
Hold position in nursing group	6	18.8	2.5
Number of agencies prior to joining the CF: None	1	5.9	5
One or more	16	94.1	5
Position in the CF:			
Staff Nurse/Team Leader	--	--	8.5
Head Nurse/Officer in Charge/Senior Nursing Officer	5	29.4	5
Manager	3	17.6	2
Outside of occupation	3	17.6	4
Other	6	35.3	2
Have always worked in the same area of practice	--	--	9
Gender: Male	1	5.9	6
Female	16	94.1	4
Married (includes divorced & separated)	10	58.8	8
Importance of career: My own	5	29.4	2
My spouse/partner	--	--	8.5
Equally important	4	23.5	8
Have children	4	23.5	6
Career progressing according to expectations	17	100	1.5

	Mean	Rank-Place
Age on completion of basic nursing education program	20.8	1
Age when joined CF	24.0	5.5
Age when first married	28.1	8

* Rank-place among the adult life cycle according to the rank grouping.

In summary, a profile of each of the adult life cycle phases according to the rank grouping has been identified from the analysis of the career history variables. The primary findings of this analysis revealed that the RN diploma was more dominant for older Nursing Officers at the Major and above ranks level and senior Captains with more than 12 years in the ranks as the basic nursing education level. However, the BN diploma is more prevalent among the Lieutenants and Junior Captains. Upgrading the basic level of nursing education to the baccalaureate and master's level is seen more often at the Major and above ranks. Most of the senior Captains ($\geq$ 12 years) and Majors and above ranks have had previous nursing experience prior to joining the CF. None of the Majors and ranks above are working at the staff nurse/team leader level and the reverse is observed with the younger military nurses. Lieutenants and Junior Captains are not usually working outside of the nursing occupation or as managers, a position they occupy later in the rank hierarchy. Military nurses in the establishment period are more involved in community organizations, and usually they hold office in such organizations. Captains $\geq$ 12 years and Majors in the maintenance phase are the most involved in nursing groups and are holding positions in those groups. Captains $\geq$ 12 years and Majors in the maintenance phase have the lowest rate of marriage. As the rank hierarchy increased the importance of the individual career increased, but the reverse is found for the importance of the spouse/partner's career or equality in both careers.

Summary of Findings

This study reveals that military nurses have data characteristics similar to the Canadian nursing workforce with respect to age, marital status, parenthood, reasons for choosing a basic nursing program, type of basic nursing education, and reasons for becoming a nurse. Differences are found in gender, rank hierarchy, highest completed level of education, specialty clinical nursing program, reasons for joining the Canadian Forces career patterns, and many geographical relocations. Career history characteristics of the Canadian Forces military nurses were analyzed according to rank groupings and a statistical difference was mainly observed between Major and above ranks and Lieutenant and Junior Captain.

In this study it was found that the first of eight career orientations for military

nurses was autonomy, followed by self-esteem and job security. The predominant career pattern for Nursing Officers was mobile advancing. The relationship between career history and adult life cycle shows again a difference in the rank groupings, mainly between Major and above ranks and the Lieutenant and Junior Captain.

CHAPTER V

Summary, Discussion, Implications, and Conclusion

The objective of this descriptive survey was to explore the factors influencing the career development of military nurses in the Canadian Forces (CF). The Canadian military nursing workforce has never been investigated before and there is no published demographic data for this particular population of nurses. The general question asked in this study was "What are the factors influencing the career development of military nurses in the Canadian Forces?" Specifically, the research questions guiding the study were:

1. What are the career history characteristics influencing the career development of Canadian military nurses?
2. What are the career orientations of Canadian military nurses?
3. What is the relationship between career history characteristics and career orientation among Canadian military nurses?
4. What is the predominant career pattern of Canadian military nurses?
5 What is the relationship between career history characteristics and adult life cycle in the career development of Canadian military nurses?

The total population of qualified Nursing Officers (NOs) in the CF was surveyed. The ranks of the NOs included Lieutenant, Captain, Major, Lieutenant-Colonel, and Colonel. Of the 360 serving Nursing Officers, 30 completed the pilot study and 330 received the final survey instrument entitled Career Orientations of Nurses Questionnaire. The questionnaire was developed by McLees (1988) and revised by the researcher to be more applicable to the military system. From the 330 surveys sent out, 243 Nursing Officers completed and returned the questionnaire (73.6%).

In summary, the nursing population had the following characteristics. The predominant gender of the respondents was female (84.8%). The proportion of males in this population (15.2%) significantly exceeds the proportion of males (5%) in the Canadian nursing workforce at large (Statistics Canada, 1993). Ages ranged from 23 to 55 years with a mean of 38 (SD = 7.9). Twenty-eight percent of the NOs had never been married, 63.4% was married or living in common-law relationships, and 8.6% was

divorced or separated. Of those married, 52.8% had a military spouse, 46.2% had a civilian spouse, and 1% did not report. Only 40.7% military nurses had children. Except for a higher male gender proportion, the demographic characteristics of this population are very similar to the present Canadian nursing workforce.

Results of this study showed that factors consistent with previous research findings relative to civilian nurses influenced the career development of Canadian military nurses. Because this study was limited to Canadian military nurses, the results cannot be considered representative of other national military nursing corps. However, these findings can provide a structure for understanding the factors that affect Canadian military nursing career development and have implications for further research.

Summary and Discussion of the Findings

In this section, the major findings are summarized and discussed according to the five research questions.

Career History Characteristics Influencing the Career Development of Military Nurses in the Canadian Forces

Education. The main findings with respect to education were as follows: basic level of nursing training and the highest completed level of education. Most of the superior officers (Majors and above ranks) (88%) began their careers with a diploma in nursing from a hospital school of nursing. Ninety-six percent have since upgraded their education to a baccalaureate degree and 24% to a master's degree, mainly through subsidization offered by the CF. In contrast, junior officers (Lieutenants and Junior Captains) tended to enter nursing through a university degree program and so far none have been subsidized to upgrade their education.

These findings reflect changes in education for nurses over the past 30 years. Hospital schools of nursing have been phased out as nursing education moves into the mainstream of educational institutions and baccalaureates in nursing programs have become more prevalent and accessible. Furthermore, professional associations have been advocating baccalaureate preparation for entry to practice in response to changes in nursing roles because of medical technology and health services.

Correlations observed between education and career advancement are to be

expected, but they may also be misleading. Promotion to superior ranks depends on knowledge, merit, and potential, not on the seniority in the CF. The selection for subsidization is based on the same criteria, but education level would not automatically ensure promotion. Over time it may be possible to determine if there is a real effect based on education. The results found in this study can serve only as a base line and subject matter for future research.

Presently, 24.7% of the CF nursing corps is enrolled in advanced education, working at the completion of an undergraduate or graduate degree. So far, nearly 85% of the NOs have completed a specialty nursing training from Aeromedevac (flight nursing) to Nursing Unit Administration courses. Because of the diversity and role of the CF, military nurses have to be highly trained and ready for operational duty at short notice, thus NOs must develop specialized skills and expertise in a wide range of practical fields of nursing practice.

Reasons for becoming a nurse. The reasons for becoming a nurse reported by these NOs are similar to the reasons found in the nursing literature (Larsen, 1984; McLees, 1988; Okrainec, 1989; Ytterberg, 1993). There is no gender difference as men cited the same reasons as women (Galbraith, 1991; Okrainec, 1986, 1989; Taylor et al., 1983). However, there were significant differences among rank groupings. Superior officers and senior Captains are older (average age of 45 years), almost all female, and have reported that they chose nursing because career options were limited at the time of entering nursing. Younger officers enrolled in nursing for employment opportunities, interest in science/medical studies, and to help others. The following comments made by the respondents in the open-ended questions illustrate these findings:

> Nursing was the only thing I could think of which had a job available after graduation (Lieutenant & Junior Captain < 4 years).
>
> Literally a vocation for me, to help others (Captain ≥ 4 < 12 years).
>
> The opportunities were limited . . . teacher, nurse, or secretary (Major and above ranks).
>
> I was interested to go to medical school, but I was not selected, so I opted for nursing (Captain ≥ 4 < 12 years).

Reasons for joining the military. Junior NOs reported that they joined for gaining and upgrading their education or because they enjoyed their previous experience in the CF as cadets or with the Reserve Force. On the other hand, senior nurses joined for the opportunity to travel. These reasons are similar to responses reported by Cotton, (1979) and Robinson et al., (1993). Typical comments of the respondents were:

> The ROTP (Regular Officer Training Plan) program looked good when I ran out of money in my 3rd year of nursing training (Lieutenant and Junior Captain < 4 years).
>
> I had been working with the CF Reserves before and during my nursing training. It was always my plan to join the CF after finishing my nursing training (Captain ≥ 4 < 12 years).
>
> I thought that through the CF I could get to see the world (Major and above ranks).

This population of nurses differs from those studied by McLees (1988) and Jackle (1993) as not only have they chosen a nursing career, but they have chosen a career within the military services. Here it can be postulated that there are two career paths. This study reveals little about the relationship of these two career paths, and this could be the subject of future research of a qualitative nature.

Pursuing a career in the CF. The decision to pursue or not to pursue a career in the CF is made at different times in the career, but mainly in the first three years. The main reasons given for not pursuing a career in the CF were intent to change career, desire to upgrade education on their own, dissatisfaction with career progression in the CF, and/or family commitments. For example, one Captain ≥ 4 < 12 years said: "My nine-year contract (Short Engagement) will end in December 94. I am getting out and planning to go back to school [for training in another health care program]." On the other hand, those who were planning to stay in the CF said:

> In my first year, it was instantaneous love for the military" (Captain ≥ 4 < 12 years).
>
> Worked in a civilian hospital, while in the CF, kept me in touch with reality. As far as nursing goes, it is not pretty out there (Captain ≥ 4 < 12 years).
>
> I do not have the choice anymore, civilian positions are scarce and the salary is

good in the CF (Captain ≥ 4 < 12 years).

Some were undecided (24.9%). For example, one Captain ≥ 12 years said: "Depending on the challenge offered to me because of the CF reduction. I became undecided only in the past year (after 16 years)." A junior officer also stated, "I am married to a service member and if we have to be separated I will take my release. I would love to stay but my marriage is more important" (Lieutenant and Junior Captain < 4 years).

Work history. Rank differences were obscured by the extent to which NOs entered the CF with prior experiences. For the Major and above ranks and senior Captains, previous experience was a prerequisite to joining the CF. For the Lieutenant and Junior Captain, the CF is their first employer.

Demographic information. Twenty-five years ago, marriage of a NO to a CF spouse meant the end of her military career. This study reveals that 33% of the NOs are married with a military spouse, 29.3% have a civilian spouse, and 37.7% are single. The implications of this phenomenon are (a) increased human resources planning in relocating military service couples to the same geographical area, (b) burdens on the family, and (c) difficulties for civilian spouses to develop a career while accompanying the military spouse so often across Canada or overseas. Typical comments of the respondents to illustrate these findings were:

> Spent the first year of our marriage apart. Posted together one month and then I was posted out. Then I got out of the CF for 5 years, had my family, and rejoined (Captain ≥ 4 < 12 years).
>
> Three geographically separated postings: one for discriminatory reason (ie. married service couples were not well accepted at that time) and two for career progression (mine) (Major and above ranks).

Perceptions of career progression: The perception had different meanings for different rank groups. Two-thirds of the Lieutenants and Junior Captains felt that their careers were progressing to their expectations, while the other third perceived the opposite. A junior officer who perceives that her career is progressing to her expectations said," I have been very lucky, posting wise, and I just love being a nurse.

I do need the 3 to 4 years change in a different nursing job." This proportion changed slightly as Nursing Officers spent more time in the CF. Sixty percent of all Captains ≥ 4 years believed that their career was progressing to their expectations, while 40% held a different opinion. Due to the rank structure of the nursing occupation, with a very limited number of positions for Major and above ranks (Captains are in the promotion zone to Major after being 4 years in the rank of Captain), many Captains felt a lot of frustration at not being able to achieve a higher rank and more challenging positions. A typical comment to illustrate this finding: "At this point in my career, I feel that I will soon start repeating assignments, as I have done just about all that my rank will allow" (Captain > 4 years). Most, 96% of the Nursing Officers in the rank grouping of Major and above ranks, perceived that their careers are progressing well.

Difference between gender and rank grouping. When all career history characteristics were analyzed to assess if there were differences between gender and rank grouping, the only variable that was statistically significant was the age at completion of basic nursing education F (45, 243) = 24.81, $p \leq .001$. Most of the female military nurses (72.8%) completed their basic nursing education before age 23 whereas only 48.6% of the males completed their program by age 23. This significant difference may be a result of the disproportionate number of males to females in the study group, and/or 55.3% of the males are concentrated in the ranks of Lieutenant and Captain < 12 years, and/or 25% of the males joined the CF as Non-commissioned Members (NCM) and then commenced their nursing career after a few years of service in the CF. The researcher was not seeking an apriori correlation between jobs held prior to enrolling and career advancement; consequently, the importance of the significant difference cannot be gauged in a related context.

Career Orientations of Canadian Military Nurses

Eight career orientations were identified from the analysis of the Career Orientation Inventory data. Career orientations are theoretically representative of the values, motives, aspirations, and talent characteristics of military nurses. Six of the eight orientations (ambition for leadership, family commitment, self-esteem, professional integrity, variety/adventure and job security) were identified in previous studies of

nurses (Aune, 1983; Jackle, 1993; McLees, 1988). Based on the literature, the researcher has labelled the remaining two career orientations as autonomy and technical competence.

Autonomy is a surprising finding, since NOs work in an environment characterized by a formal military bureaucracy that would seem to offer few opportunities for involvement in decision making and innovation (Derr, 1980; Robinson et al., 1993). Autonomy had the highest mean score of all the career orientations; it ranked first for the rank grouping of Lieutenant to Captain < 12 years and second for the Captain ≥ 12 years and the Major and above ranks. Also, autonomy showed a significantly higher mean factor score for women ($\underline{M} = 3.39$) than for men ($\underline{M} = 3.17$).

Autonomy may represent two different meanings: (a) personal autonomy or control over certain aspects of work such as schedule and compensation (Schein, 1980b; Aune, 1983), and (b) professional autonomy or the ability to perform services commensurate with education, responsibility to initiate and carry out actions, and answering for the results (Mundinger, 1980; Collins, 1991). Autonomy may have a similar meaning to another career orientation labelled *independence* by Jackle (1993) and McLees (1988). The higher mean scores on autonomy of Junior NOs compared to the more senior officers are an interesting finding. This result may be due to differences in the focus of their work (i.e. patient care rather than management or education and/or also differences in their nursing preparation).

Technical competence as a career orientation is an integral aspect of nursing practice. Nursing work environments have become increasingly technical with sophisticated software and hardware involved in direct patient nursing care. The work of the CF nurses is equally "high tech," especially for those respondents who work in intensive care units or other highly specialized units. The importance of technical competence as a career orientation is to be expected in the CF, because the military system provides specialty preparation to meet diverse operational needs in combat theatres that can occur in any global location or under any climatic conditions. Thus, NOs must develop specialized skills and expertise in a wide range of practical fields of

nursing practice. Furthermore, the use of specialized equipment designed for military purposes and the confidence gained from its use and the perception of having to use this technical equipment in diverse conditions would lead to a greater sense of autonomy as well.

One career orientation that does not identify in this military nursing population is altruism. Schein (1978) has suggested that *service to others* is an "anchor" for some professions such as social work and medicine which allows "the person to express basic needs, talents and values to work with others in a helping role" (p.170). Aune (1983) found that every nurse "had an overwhelming need and/or desire to serve others" (p.79). Although this orientation was identified in the comments that respondents made regarding their decisions to become nurses, it did not clearly surface during factor analysis. Altruism items on the questionnaire that had been previously identified by other researchers (Jackle, 1993; McLees, 1988) clustered with other factors such as autonomy, self-esteem, and technical competence.

A relationship was found between ambition for leadership, autonomy, self-esteem, technical competence, and variety/adventure. Autonomy, self-esteem, and technical competence also formed a relationship, as did self-esteem, technical competence, and variety/adventure. Similar results were found in McLees (1988). The low reliability coefficient ($r=.39$) of the professional integrity subscale, which is lower than McLees' (1988) ($r=.62$), should be noted. The result may be due to the homogeneity of the population. The more homogeneous the population is, the more similar is the score and hence the reliability coefficient (Polit & Hungler, 1987; Waltz, Strickland, & Lenz, 1991). The most appropriate method for collecting data throughout the career anchor literature has been the subject of many debates. DeLong (1982) and Derr (1980) have both declared that the questionnaire approach may not be appropriate as a means of identifying career anchors and assessing the internal career orientation of individuals. The researcher tends to agree with this assertion. McLees' questionnaire (1988) was a good instrument for collecting data from a sample scattered across Canada and overseas, but it had limitations in confirming whether the values, motives, and talents tended to "guide, constrain, stabilize and integrate the person's career" (Schein, 1978, p. 127).

Further development of a career orientation typology is necessary.

Relationship Between Career History Characteristics and Career Orientation Among Canadian Military Nurses

The variables of the 43 career history questions (Part I of the questionnaire) were compared individually with the mean factor scores of the eight career orientations. None of the career orientations were found to dominate the analysis; however, professional integrity was consistently ranked the lowest as only "somewhat important." As explained before it is possible that the reliability of the professional integrity scale was low ($r=.39$) due to the homogeneity of the respondents. Conversely, it may indicate that this is specific to a military population and that other forms of professional integrity such as military professionalism overshadow the individual professional integrity sought for in previous research. Further research with professional integrity is needed.

The staff nurses in this study exhibited the highest orientation for autonomy, self-esteem, and job security. Comparatively, staff nurses in Aune's study (1983) were more interested in security, autonomy, technical and managerial competence. However, staff nurses in McLees' study (1988) presented higher orientations for family commitment, self- esteem, independence, and altruism. Jackle (1993) found that contingent nurses ranked altruism and independence in the first two positions.

In her study of nurses, Aune (1983) found that the managerial group exhibited autonomy and technical orientations; McLees' (1988) management group showed self-esteem, independence, family commitment, and altruism. In this study, the head nurse, senior nursing officer, officer in charge, or the manager demonstrated a higher orientation towards autonomy, self-esteem, and job security.

Although military nurses appear to have several definite career orientations, none were particularly dominant. Family commitment was the most frequently identified career orientation, statistically significant for eleven of the 43 questions. Family commitment was followed by variety/adventure, ambition for leadership, self-esteem, job security, autonomy, and technical competence. No general gender differences were observed; however, the results showed that autonomy was statistically significant, favoring female nurses.

Generally, the comparison of Career History with Career Orientations did not provide sufficient information to be conclusive. The method of this study did not lend itself to the evaluation of the possibility that career orientations change over time as Derr (1980) suggests or if they are present and stable throughout the career. A longitudinal study might provide an understanding of the relationship between career history and career orientations over time.

Predominant Career Pattern of Canadian Military Nurses

Five career patterns were investigated based on a typology found in the literature (McLees, 1988): stationary place-bound, mobile lateral, advancing place-bound, mobile reverting, and mobile advancing. The predominant career pattern was mobile advancing (48.3%). All Major and above ranks and most of the Captains > 4 years in the rank stated that they were in the mobile advancing pattern while the Lieutenants and Junior Captains were in the stationary place-bound and mobile lateral. That structure and process of career pattern is expected, as junior officers must acquire knowledge and skills and seniority in the rank before being promoted to superior rank. McLees (1988) reported that 26.7% of her sample had a mobile advancing career and 39.9% mobile lateral, while Jackle's sample (1993) exhibited 65% for a lateral career path and 35% for mobile advancing. As this population is different from other samples due to the work/military life events in the CF, rank level, time in the nursing practice, work in different positions, many relocations, and not always being in the same area of practice, it is difficult to compare results with other studies. But similarities are found with different samples that had the same basic nursing program, a Baccalaureate's degree. Lewin and Olesen (1980) reported that 33% of their sample of nurses had lateral careers, McLees' (1988) sample showed 21.4%, and this study shows 34%. For the mobile advancing careerist, the highest completed level of education is similar between McLees' study (RN, 44.7%; Baccalaureate, 46.8%; Master's, 8.5%) and this study population (RN, 41.9%; Baccalaureate, 52.1%; Master's, 6%).

The comparison between career orientations and career patterns is displayed in Table 97. The difference in ranking is presented between mobile lateral and mobile advancing career paths from Jackle (1993), McLees (1988), and this study.

Table 97

Career Orientations and Career Patterns Compared with Nursing Studies

Orientation	Mobile Lateral Career			Mobile Advancing Career		
	McLees (1988) 8 orientations	Jackle (1993) 7 orientations	Fortin (1994) 8 orientations	McLees (1988) 8 orientations	Jackle (1993) 7 orientations	Fortin (1994) 8 orientations
Ambition for leadership	8	7	7	6	6	6
Family commitment	1	3	5	4	4	7
Autonomy (independence)	4	2	1	2	2	2
Self-esteem	3	N/A*	2	1	N/A*	1
Technical competence	N/A*	N/A*	6	N/A*	N/A*	5
Variety/adventure	5	5	4	5	5	4
Job security	7	6	3	8	7	3
Professional integrity	6	4	8	7	3	8
Altruism	2	1	N/A*	3	1	N/A*

* N/A: Not Applicable

Jackle's ranks are based on seven orientations (did not include self-esteem); McLees included eight orientations. None of the career orientations rankings were identical among the studies for the mobile lateral group. However, a slight difference existed in the ranking between ambition for leadership, variety/adventure, and self-esteem among the three above-mentioned studies.

When comparing mobile advancing career patterns, identical rankings are found for ambition for leadership, self-esteem, and autonomy (independence). Variety/adventure has almost the same ranking while all others orientations are quite different. Therefore, it appears that career patterns and career orientations for military nurses differ substantially from other nursing samples, especially for mobile lateral careerists.

Relationship Between Career History Characteristics and Adult Life Cycle in the Career Development of Canadian Military Nurses

The literature review indicated that most people experience phases of an Adult Life Cycle. While there are exceptions and the cycle is not exact for everyone, there is a general pattern that is generally broken down into three applicable phases, namely Exploration (ages 18 to 29 years), Establishment (ages 30 to 45), and Maintenance (age 46 +). In this study, the population was further divided by rank; thus, there resulted a four by three matrix (Chapter 4, Figure 2).

The researcher explored the possibility that there was a trend of career patterns across the rank / adult life cycle matrix (Figure 3). Mobile advancing was found in all the cells of the matrix but was unique at the Major and above rank. As noted before, this is due to the nature of the work of this rank grouping mainly in a manager's position.

RANK	Exploration ≤ 29 years	Establishment ≥30 ≤ 45 years	Maintenance 46 + years
Major & above ranks		**MA 100% n = 8**	**MA 100% n = 17**
Captain ≥ 12 years		**MA 59.0% n=23/39** MR 23.0% n=9/39 ML 10.2% n=4/39 APB 7.7% n=3/39	**MA 62.5% n=20/32** MR 28.1% n=9/32 ML 9.4% n=3/32
Captain ≥ 4 < 12 years	**MA 60% n=3/5** ML 20% n=1/5 SPB 20% n=1/5	**MA 39.4% n=28/71** ML 28.2% n=20/71 MR 23.9% n=17/71 SPB 4.2% n= 3/71 APB 4.2% n= 3/71	**MA 75.0% n=6/8** MR 12.5% n=1/8 SPB 12.5% n=1/8
Lieutenant & Junior Captain	**ML 32.4% n=12/37** SPB 27.0% n=10/37 MR 16.2% n=6/37 MA 13.5% n=5/37 APB 10.8% n=4/37	**ML 40% n=10/25** MA 28% n=7/25 SPB 20% n=5/25 APB 8% n=2/25 MR 4% n=1/25	

ADULT LIFE CYCLE PHASE

Figure 3. Career Patterns by Adult Life Cycle Phases and Rank Levels

Notes: Career Pattern Legend **ML** = Mobile Lateral, **MR** = Mobile Reverting, **MA** = Mobile Advancing, **APB** = Advancing Place-Bound, **SPB** = Stationary Place-Bound,

The literature reviewed indicated that at each Adult Life Cycle Phase there would be common patterns and experiences for the greater proportion of people. Similarly then, given the uniformity of the CF training program and commonality of employment practices and types of employment for Nursing Officers, there could be prevalent career patterns that may have future implications. Because the Adult Life Cycle Phases are in blocks, it is useful to discuss the career patterns by rank and cycle phase.

Exploration period. In the exploration period, between the age of 16-25 years, Levinson et al. (1978) reported that individuals leave school, start a first job, and begin to develop career expectations. Between the mid-twenties and early thirties, called the transition phase, people establish an occupational structure, personal and work commitments, marriage, community involvement, and formulate the career/life "dream." Fulfilling the dream then becomes the goal and the focus of their efforts, actions, and career behavior decisions.

Previously a profile of the military nurses in the Exploration period was developed. In summary, military nurses in this exploration phase (n = 42) completed their basic nursing education at the average age of 21.5 years, joined the CF at an average age of 20 years, generally for subsidization of their nursing education. Those who got married did so at an average age of 23.6 years (64.3% are married and 21.4% have children). They generally did not become involved in the community (28.6%), and the majority (64.3%) were satisfied that their careers were progressing according to their expectations. The following comments made by the respondents in the open-ended questions illustrate these findings.

> Although some of my responses may reflect otherwise, I feel that military nursing can be a challenging, rewarding career for some. Since joining the CF at age 17 "fresh out of high school," my personal goals regarding career and family, the general direction of my life have changed (evolved?). Now, I find little satisfaction in military nursing. The idea that I will probably never get promoted to Major, will have little to say for future posting or positions, and the shrinking option for posting/employment does not endear military nursing for me as a long-term career (Lieutenant & Captain < 4 years, married).

Figure 3 reveals that Mobile Lateral and Stationary Place-Bound career patterns are most common at The Exploration phase. This is expected, given the typical work assigned to new NOs. They are usually placed in a start position, and within the first four years, will undertake a number of entry level jobs designed to give them experience, confidence, and time to develop leadership and supervisory skills. At this stage, Mobile Reverting, Mobile Advancing, and Advancing Place-Bound patterns were also observed.

Within the Exploration period, it is usual for a Lieutenant to be promoted to Captain and to receive additional training, including specialty courses and positions of more responsibility. According to the age at enrollment, some Captains $\geq 4 < 12$ years are found in this phase. Their dominant career pattern is Mobile Advancing, which is commensurate with a second posting and/or assignment of additional responsibilities.

Establishment Period Twenty-five Lieutenants and Junior Captains were found in the Establishment phase, with an average age of 25.8 years at enrollment. As discussed earlier in the literature review, the Establishment period between age 30-40 years marks the career peak, a high level of competence, and independence. Between ages 40-45 years is the period of mid-life transition and, depending on how the "dream" has been achieved, people evaluate and decide whether to pursue the dream or to accept realistic career expectations, settle, enjoy life, and have career satisfaction (Levinson, 1986). For women, this phase may show a change in the pattern of commitment to career and family; there may be an increased desire for personal expression in work and family life.

There was representation from all ranks in the Establishment phase with a total of 143 NOs. A typical profile of NOs in the Establishment phase is as follows: Military nurses completed their basic nursing education at the average age of 22.4 years. They graduated from different types of nursing education programs and worked in civilian health care establishments before joining the CF at the average age of 24.2 years. They got married at the average age of 26.8 years; 79% are married and 47.6% have children. They are involved in the community (43.4%) with 60.1% saying that their careers are progressing according to their expectations. Comments of this group to open-ended questions were:

I always found my military work very satisfying, so I transferred from the

> Reserve to Regular Forces. The first five years have been spent gaining extensive experience in medical/surgical nursing. I am looking forward to varied experience in other positions, other area of nursing practice, isolation, specialty training, UN (United Nations) taskings. I believe that nursing in the CF is a unique opportunity for nurses. It affords us a chance to work in a wide variety of challenging positions (Lieutenant and Junior Captain < 4 years, single).
>
> The limitations of career progression in rank, and particularly advanced nursing education (Master's degree) are the major reasons why I am leaving. Since promotions are held, and funding to advanced language training is limited, and I am not a Major, the potential for obtaining a Master's in nursing is very slim. I must leave to achieve my goals. I have enjoyed my career and I am leaving with regret. The CF would encourage excellence in Nursing by changing policies allowing nurses at the mid-rank level to advance their education with Master's training, particularly clinical Master's (Captain $> 4 \leq 12$ years, married).
>
> Being married played a large role in the choice of my posting. My husband and I were looking forward to having a career, therefore my choice of relocation and posting was influenced by that. I am still very happy with my career (Major and above ranks, married with children).

In the Lieutenant & Junior Captain group, the dominance of the Mobile Lateral Career pattern is observed. Here, the Nursing Officer is gaining experience in a number of diverse jobs and units. Mobile Advancing is also applicable to some of the Nursing Officers as they may have enrolled earlier than other NOs and are approaching the 4-year seniority break as Captains. Of note is the low number of Stationary Place-Bound, Advancing Place-Bound, and Mobile Reverting careerists.

Once in the Captain $> 4 \leq 12$ years group, the opportunity to realize the dream is evident, because in this group the Nursing Officer becomes eligible for promotion to Major. For this group, the dominant career pattern is the Mobile Advancing. Mobile Advancing as a dominant career pattern is not surprising nor is it unreasonable to expect. The next two dominant career patterns are Mobile Lateral and Mobile Reverting. Mobile Reverting may indicate a change in the nurses' desires for promotion and may also indicate that pursuing the dream is secondary to other aspects in their lives such as the spouse's career or desire to have or raise children.

The majority of the Nursing Officers in the Captain ≥ 12 years group are in the

Mobile Advancing Career pattern. In this phase, Nursing Officers who have accumulated a series of favorable Personnel Evaluation Reports might be able to realize the dream of being promoted. Because promotion is based on merit and there is a very limited number of promotions to Major each year, the requirement to maintain a high level of performance and to accept new positions of greater responsibility will provide the nurse with the opportunity to demonstrate his/her ability to the fullest. Following Mobile Advancing as a dominant career pattern is the Mobile Reverting pattern. It can be speculated that either a change occurs or the Nursing Officer has completed all new positions available for the rank level and thus must accept a position previously completed at another unit. An example of mobile reverting pattern would be to have completed a posting as a senior nursing officer in a small hospital and be posted to the National Defense Medical Centre as a team leader. At this phase, the Advancing Place-Bound careerists must make a change in their career pattern. They must move either upwards, laterally, or reverting.

Lastly are superior officers. In this group, 100 % are Mobile Advancing, which suggests that if a Nursing Officer did not adopt a Mobile Advancing Career Pattern prior to promotion, then promotion is likely suspect.

Maintenance Period. At the beginning of the period between age 46 to 50 years, innovation or stagnation is expected, according to the literature. People in this phase usually realize that they may be unsuccessful in achieving their dreams. Thus, individuals may try to make changes to enrich their lives within their limitations. Between the ages of 50-60 years, the career continues to decelerate (Levinson, 1986; Super, 1986).

This group of military nurses (n = 57) included rank groupings from Captain > 4 years to Major and above ranks. They completed their basic nursing education at the average age of 22 years. They graduated from different types of nursing education programs with the majority having an RN diploma and working in civilian health care establishments prior to joining the CF at the average age of 26 years. They got married at the average age of 28.2 years; 58.6% are married and 32.8% have children. They are involved in community organizations (41.3%) with 65.5% stating that their careers are

progressing according to their expectations. Comments to open-ended questions were:

> Very difficult to balance own expectations, personal goals of balancing career and family and meeting expectations and needs of military (Captain $> 4 \leq 12$ years, married with children).
>
> If I had wanted a real career in the CF, I would be probably divorced by now. It depends what you are looking for. I want an interesting job, good money, but what I wanted most was my family. That is why I am still a Captain, but that's OK with me and I enjoyed most of my time in the CF (Captain $\geq$ 12 years, married with children).

While the Mobile Advancing career pattern is still dominant in the Maintenance phase, there are few alternative career patterns. The Nursing Officers are senior enough to know what is expected of them and what they can expect from the CF. Also, because of the Nursing Officers' seniority, the Mobile Reverting career patterns, is not detrimental to them for staying in the CF. If a Nursing Officer has completed all career pattern there are few options for new challenges available unless he or she is promoted. There is the likelihood that the desire for Nursing Officers to maintain their usual standard of performance is congruent with the adoption of a Mobile Lateral career pattern.

For the Major and above ranks, the only career pattern is Mobile Advancing. This pattern is observed because most of the superior officers have had an extended period of service, and opportunities for advancing their careers were dependent on being able to accept those opportunities. As only one career pattern was observed for superior officers, the question of whether a mobile advancing career pattern is essential for achieving ranks would be an interesting area for further inquiry. Due to the limited number of male NOs, it was not feasible to assess a difference by gender. The overall typical career pattern of military nurses in this study seems to support the propositions of the Adult Life Cycle. The results of this study are similar to the results found by Levinson (1986), Levinson et al. (1978), Roberts (1992), Roberts and Newton (1987), and Super (1986). However, the correlations of career pattern, career orientation, and the adult life cycle requires further study.

Nursing Implications

This is the first comprehensive study conducted of military nurses in the CF. The results of this study will provide base line data for future research involving this unique nursing population. The study provides preliminary information for orienting new nursing officers to the career opportunities in the CF. The information could help military nurses to recognize that they can control their professional destiny by assessing their strengths, values, motives, aspirations, and talents in relation to themselves, family, and work. They must also identify their desired goals and evaluate present and future constraints when planning their personal career programs. A better understanding of what military nurses perceive as career development can help them to achieve their future goals and "dreams."

The Canadian Forces who employ these military nurses have responsibilities and expectations in relation to the individual's career planning. Nursing managers should assist military nurses to recognize and manage their potential by promoting career plans that are conducive to retaining and/or promoting their career aspirations.

Further research is required to enhance the understanding of Career Orientations to determine if the identification of career orientations is a real phenomenon or simply a statistical effect. Enhancing the understanding of career orientations may also contribute to the development of a standardized typology. It is important to expand the understanding of how career history influences the development of career orientations as the individual passes through the Adult Life Cycle and the experiences of his/her employment.

For this unique population, investigation of the influence of the military career versus the nursing career might be useful to determine if there is a divergent or parallel career path for nurses who seek advancement militarily or who wish to develop their professional care giving skills. It would also be useful to know how work experience, level of education, and life events influence the direction of a military nurse's career development. Similarly, future research can be applied to investigate if career orientations change with time and thus result in the nurse making career decisions that would impact on the type of career pattern chosen. It might also be useful to repeat this

research using a longitudinal study to investigate if career orientations change over a 10- to 15-year period or if they remain stable. Lastly, future research can enhance the understanding of gender issues in the development of a career in the CF.

Limitations of the Study

This study was restricted to the serving Nursing Officers of the Canadian Forces, regular component. The results may not be generalizable to the Nursing Officers serving in the militia or civilian nurses working for the CF or any other military organization.

As for all studies using self-administered questionnaires, the study was limited by the potential for misinterpretation of the instructions and subjective responses. The researcher had no control over the time, place, or context in which the respondents completed the questionnaire. Participants were required to recall events of the past which may have influenced the accuracy of their responses. At the time of the study, there were public discussions about downsizing the CF which may have influenced the responses of the participants.

The organizational structure and culture in the military system promotes rank consciousness. As the researcher is a Major in the CF and well-known by many of the participants, there was potential for the respondents to answer questions in a desirable fashion rather than in the way that reflects their feelings and thoughts.

Conclusion

The results of this study indicate that military nurses are similar to Canadian nurses at large regarding their age, marital status, parenthood, reasons for choosing a basic nursing education program, type of nursing program, and reasons for becoming a nurse. They differ in that they are Officers in the Canadian Forces, they are designated and classified by their military rank, and they have a higher proportion of male nurses. They are also significantly better educated than their civilian counterparts.

Factors influencing career development of military nurses in the Canadian Forces are unique to this nursing population. A difference has been found for the basic nursing education training and the higher completed level of education. It is unclear, however, whether educational upgrading was the result of being promoted to a higher rank or if education contributed to the achievement of a higher rank. Previous nursing research

indicated that the career orientation of altruism would be a prominent career orientation. In this study, altruism was not identified at all. Conversely, autonomy was a key career orientation which was not anticipated. This result may be particular to the military population. None of the career orientations were dominant and very few changes were observed between ranks and across time.

As nurses decide to join the CF and to pursue a career as Nursing Officers, it is clear that there are many factors influencing the career development of this unique nursing population. Without an understanding of these influencing factors, how can military nurses, nursing managers, and policy makers evaluate and make the necessary changes in the roles and types of employment to meet nursing resource requirements of military services? In this post-cold war era as the mission of the CF is reviewed, the role of the nursing branch is likely to change. The results of this study will provide a clearer perspective on how to match the career development of military nurses with the requirements of the Canadian Forces.

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APPENDIX A

NURSING OFFICER OCCUPATION SPECIALTY QUALIFICATIONS

NURSING OFFICER OCCUPATION SPECIALTY QUALIFICATIONS

57.A1 - INTRODUCTION TO NURSING MANAGEMENT

57.A2 - ONCOLOGY

57.A3 - POST GRADUATE (PG) HEALTH SERVICES

57.A4 - NURSING - OBSTETRIC - BASIC

57.A6 - NURSING - BACCALAUREATE

57.A7 - NURSING - FLIGHT - ADVANCED

57.A8 - NURSING - CRITICAL CARE

57.A9 - NURSING - OPERATING ROOM

57.B1 - NURSING - PSYCHIATRIC

57.B2 - NURSING - COMMUNITY HEALTH

57.B3 - NURSING - FLIGHT BASIC

57.B4 - NURSING - PRIMARY CARE

57.B5 - NURSING - OBSTETRICS - ADVANCED

57.B6 - NURSING - SENIOR NURSE

57.B7 - NURSING - PHARMACY MEDICAL SUPPLY

57.B8 - NURSING - JUNIOR NURSE

57.B9 - LASER SAFETY (MEDICAL)

57.C2 - ADVANCED PNEUMATIC INSTRUMENTATION (MIDAX REX)

57.C4 - EMERGENCY CARE

APPENDIX B

CAREER PATTERN of NURSING OFFICER

in the CANADIAN FORCES

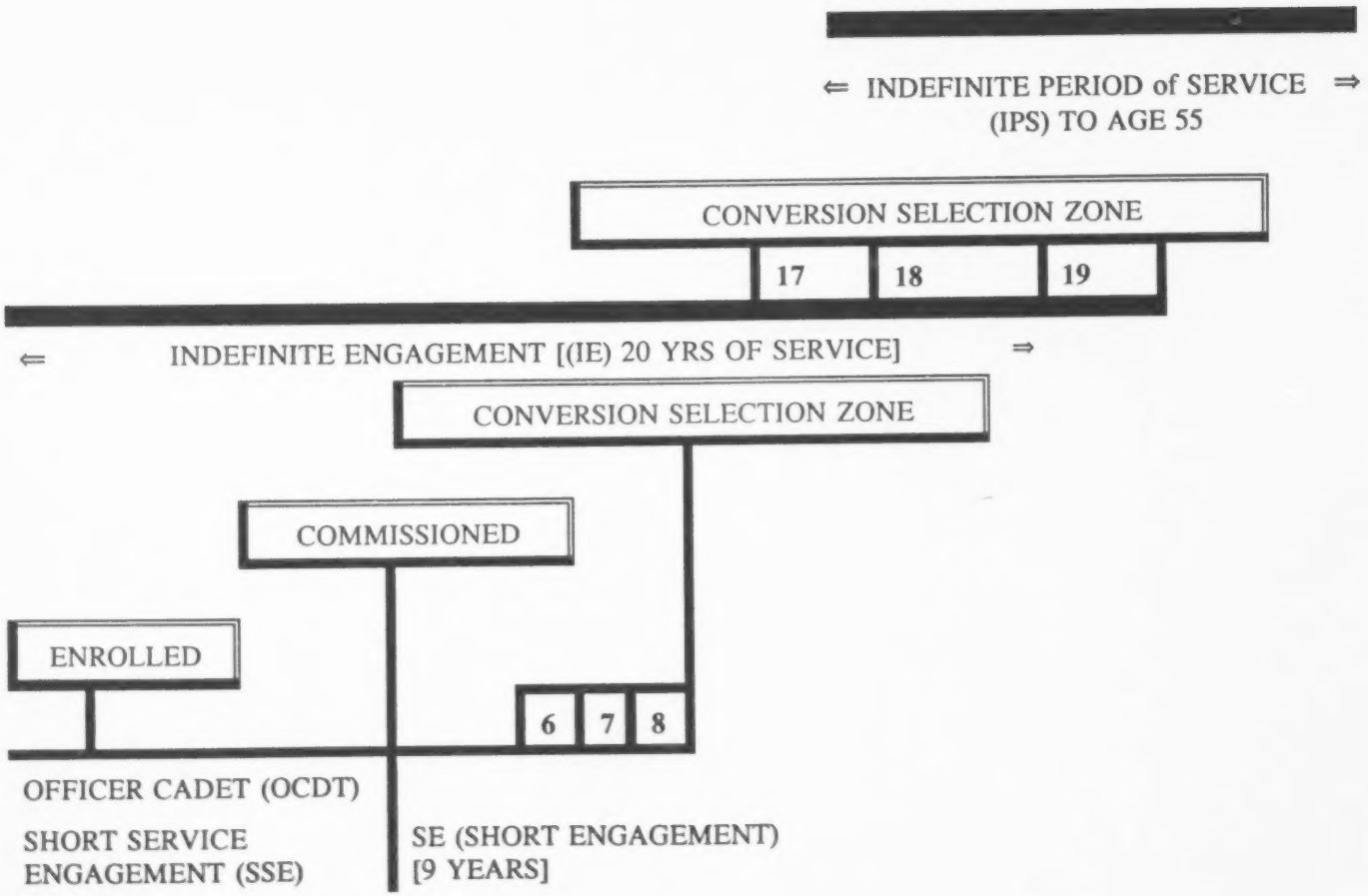
CAREER PATTERN of NURSING OFFICER in the CANADIAN FORCES

RANK HELD	TO QUALIFY FOR NEXT RANK	MINIMUM TIME IN RANK	TYPES OF EMPLOYMENT
Lt	Capt	3 years	1) BASE MEDICAL CLINIC - General Duty Nurse (GDN) 2) BASE HOSPITAL - GDN - Community Health Nurse (CHN) 3) CF HOSPITAL/NDMC - GDN - Specialty Nursing (SN) - Instructor 4) CF MEDICAL SERVICES SCHOOL (CFMSS) - Instructor 5) FIELD SURGICAL HOSPITAL (FSH) - GDN NON-OCCUPATIONAL EMPLOYMENT - CF OFFICER-CADET SCHOOL - Instructor
Capt	Major	4 years	1) BASE MEDICAL CLINIC -GDN - CHN 2) BASE HOSPITAL - Senior Nursing Officer (SNO) - GDN - CHN 3) CF HOSPITAL/NDMC - GDN - Head Nurse (HN) - SN - Instructor Nursing Coordinator 4) CFMSS - Instructor 5) FIELD SURGERY HOSPITAL (FSH) - GDN 6) EXCHANGE - UK - USA 7) UN DUTIES 8) NDHQ - STAFF OFFICER NON-OCCUPATIONAL EMPLOYMENT - CF OFFICER-CADET SCHOOL - Instructor CF RECRUITMENT CENTER - ANY GENERAL SERVICE OFFICER POSITION
Maj	LCol	3 years	1) NDMC - Nursing Education Head - A/D of Nur - Nur Dept Hd - Acute Care Dept Hd 2) CFMSS - Course Director 3) COMMAND/NDHQ - Staff Officer 4) FSH - Director of Nursing 5) CFH - Director of Nursing 6) PCO/NUR NON-OCCUPATIONAL EMPLOYMENT - ANY GENERAL SERVICE OFFICER POSITION
LCol	Col	3 years	1) NDMC/CFH HALIFAX - DIR OF NURSING NON-OCCUPATIONAL EMPLOYMENT - ANY GENERAL SERVICE OFFICER POSITION
Col			1) CF CHIEF OF NURSING SERVICES NON-OCCUPATIONAL EMPLOYMENT - ANY GENERAL SERVICE OFFICER POSITION

APPENDIX C

CANADIAN FORCES OFFICER CAREER DEVELOPMENT PLAN

CANADIAN FORCES OFFICER CAREER DEVELOPMENT PLAN



APPENDIX D

SUMMARY of CAREER ANCHORS

SUMMARY of CAREER ANCHORS

Author	Subjects	Anchors	Methodology
Schein 1961-1973	Sloan School of Management Alumni. n= 44 (male) Classes: 1961-62-63	1. Managerial competence 2. Technical/functional 3. Security 4. Creativity 5. Autonomy/independence	Interviews and/or questionnaire. + 1 year - interview + 3-5 years - questionnaire + 12 years - taped interview 2-3 hours Career history, reasons for movement, attitude, family concerns, work concerns
Derr 1977-1979	USA Naval Officers n=154 (male) 25 wives included	1. Managerial 2. Technical 3. Security 4. Identity/affiliation 5. Autonomy 6. Creativity 7. Warrior/adventurer	Interview (Schein) Questionnaire (Chatwin and Derr) return (n=136)
DeLong 1982	Graduates MBA (Purdue Univ.) n=600 (male)	1. Technical competence 2. Autonomy 3. Service 4. Identity 5. Variety 6. Managerial competence 7. Security 8. Creativity	Questionnaire 55% return (n=320) Test-retest with Pearson r Factor analysis-- 3 factors 1.variety, managerial competence; 2.autonomy, creativity; 3. service, identity, security.

APPENDIX E

SUMMARY of CAREER ANCHORS in NURSING

SUMMARY of CAREER ANCHORS in NURSING

Author	Subjects	Anchors	Methodology
Aune 1983	n = 40 RN (female) 10 administrators 10 educators 10 nurses practitioners 10 staff nurses + 5 years experience, B.N.	1. Autonomy 2. Managerial 3. Technical 4. Security 5. Unidentified 6. Service	Pilot n = 10 M. N. Work history Interviews (Derr) (not taped) Reports: Number of subject in each practice group with each anchor. Chi-Square
McLees 1988	n = 365 RN (male and female) + 10 years experience Hospital, College, University diploma.	Clusters: 1. Ambition for leadership, variety, self-esteem; 2. family commitment, altruism, independence; 3. job security, professional integrity.	Pilot testing Questionnaire 55% return (n = 202) Career history, Career Determinant Inventory (CDI) Reports: Rank order, mean factor square, mean range value, intercorrelation of anchor ranking and career patterns.
Jackle 1993	n = 957 RN (male and female) Contingent employment in nursing: Agency, traveler, pool, contractor, moonlighter	1. Altruism/service, 2. Independence 3. Family commitment 4. Professional integrity 5. Variety/adventure 6. Job security 7. Ambition for leadership	Pilot testing Questionnaire 16% return (n = 153) Job satisfaction, career anchors Reports: Chi-Square, ANOVA, multiple regression.

APPENDIX F

CAREER ORIENTATIONS of NURSES QUESTIONNAIRE

CAREER ORIENTATIONS OF NURSES

PART I: CAREER HISTORY

Please check or fill your appropriate response(s).

DO NOT WRITE IN THIS AREA

A. EDUCATION

1. What was your age when you completed your basic nursing program?
_____ years

2. What factors influenced your choice of your basic nursing education program?
(Please check all applicable responses)

only program available	____ 1
geographical closeness	____ 2
financial reasons	____ 3
advice of friend/relative	____ 4
family ties/responsibilities	____ 5
career plans	____ 6
did not know about any others	____ 7
other (specify)_____	8

3. What is your basic nursing education?

RN diploma	
Hospital School of Nursing	____ 1
College / Institute/ Technical School of Nursing	____ 2
Baccalaureate in Nursing	____ 3

4. What is your highest completed level of education?

RN diploma	____ 1
Baccalaureate (nursing-basic)	____ 2
Baccalaureate (post-basic)	____ 3
Baccalaureate (non-nursing)	____ 4
Master's (nursing)	____ 5
Master's (non-nursing)	____ 6
Doctorate (nursing)	____ 7
Doctorate (non-nursing)	____ 8

5. Are you currently enrolled in an advanced education program?

No	.....	____ 1
Yes,	Undergraduate studies	____ 2
	Graduate studies	____ 3

DO NOT WRITE IN THIS AREA

6. What other nursing education programs have you enrolled in since graduating from your basic nursing program? (Check all applicable responses)

None	____ 1
Clinical specialty course (specify)	
Obstetrics	____ 2
Flight	____ 3
Critical care	____ 4
Operating Room	____ 5
Psychiatric	____ 6
Community health	____ 7
Teaching diploma	____ 8
Other (specify) _____	9

7. Do you have a recollection of when you decided to become a nurse?

Yes	____ 1
No	____ 2

8. Please describe the reason(s) why you became a nurse.

_____

_____

_____

9. Did you complete any other education (training) program prior to entering nursing? (Check all applicable responses)

no	____ 1
Registered Nursing Assistant	____ 2
Partial or completed university degree	____ 3
Other (specify)_____	4

B. PROFESSIONAL/COMMUNITY ACTIVITIES

10. Do you maintain a registration as a nurse in one of the professional nursing associations?

Yes	____ 1
No	____ 2

11. If you DO NOT maintain a registration with a professional nursing association. Please indicate your reason(s)

not necessary	____ 1
no interest	____ 2
cost too much	____ 3
not required by the CF	____ 4
other (specify) _____	5

DO NOT WRITE IN THIS AREA

12. Do you currently hold office or a committee position in your professional association or in a nursing interest group?

Yes	____ 1
No	____ 2

13. Are you currently involved in any community organizations? (Check all applicable responses)

No	____ 1
church	____ 2
service	____ 3
youth	____ 4
political	____ 5
community league	____ 6
other (specify)_____	____ 7

14. Do you currently hold office or a committee position or work in some volunteer capacity in any of the organizations listed in question 13?

Yes	____ 1
No	____ 2

WORK HISTORY

15. In what type of organization/agency did you take your first nursing job? (Please check only one)

CF	____ 1
General hospital (urban)	____ 2
General hospital (rural)	____ 3
Long term care	____ 4
Psychiatric hospital	____ 5
Nursing home	____ 6
Community health	____ 7
Home care	____ 8
Occupational health	____ 9
Doctor's office	____ 10
other(specify) _____	____ 11

16. What area(s) of practice did you work at in your first nursing job following registration? (Please check all applicable responses)

medical/surgical nursing	____ 1
obstetrical nursing	____ 2
pediatric nursing	____ 3
psychiatric nursing	____ 4
emergency nursing	____ 5
operating room nursing	____ 6
intensive care nursing	____ 7
community health nursing	____ 8
geriatric nursing	____ 9
home care	____ 10
float	____ 11
other (specify) _____	12

DO NOT WRITE IN THIS AREA

17. Before joining the CF, how many agencies/ hospitals did you work in as a nurse? (Please check one response only)

none	____ 1
one	____ 2
two	____ 3
three	____ 4
four or more	____ 5

18. What was your age when you joined the Canadian Forces? ____ years

19. What is your rank in the CF?

Lt. or Captain (less than 4 years in rank)	____ 1
Captain (4 years & less than 12 years in rank)	____ 2
Captain (more than 12 years in rank)	____ 3
Major or above	____ 4

20. Why did you join the Canadian Forces as a Nursing Officer? (Please describe)

_____

_____

_____

21. Are you going to pursue a career as a Nursing Officer in the CF?

Yes	____ 1
No	____ 2
Undecided	____ 3

Comments_____

_____

22. Once you became a Nursing Officer, how long did it take for you to decide that you wanted or did not want to pursue a career as a military nurse?

____years

Comments_____

_____

DO NOT WRITE IN THIS AREA

23. Some studies reveal patterns that describe nursing career mobility Please read each description carefully, then respond to both questions.

Which **PATTERN** number describes your career the closest
before you joined the CF? _____

since you joined the CF? _____

(1) **Stationary Place-Bound Career** – is when a nurse has always worked as a staff nurse/team leader in the same agency/hospital.

(2) **Mobile Lateral Career** – is when a nurse has worked in more than one agency/hospital in different geographical locations but always at the staff nurse/team leader level.

(3) **Advancing Place-Bound Career** – is when a nurse has worked for the same agency/hospital, but has been upwardly mobile within the institution.

(4) **Mobile Reverting Career** – is when a nurse has worked in more than one agency/hospital at several position levels but at time of this survey, is working as a staff nurse/team leader

(5) **Mobile Advancing Career** – is when a nurse has worked in more than one agency/hospital, at more than one position level and appears to have advanced up the professional ladder

(6) **None** of the above

24. For each posting to a new unit or a new geographical location, after BNOC, describe the number of times the posting was:

a. accepted willingly by you _____1
b. required by the military but not desired by you _____2
c. requested by you _____3
d. total number of postings _____4

Comments_____

25. Would you prefer to be employed out of nursing occupation in the CF if given the opportunity?

Yes _____ 1
No _____ 2

Comments_____

DO NOT WRITE IN THIS AREA

26. What is your position at present? (Please check only one)

Staff nurse/team leader	____	1
Head nurse/ Officer in charge/ Senior nursing officer	____	2
Manager	____	3
Outside of occupation	____	4
Other	____	5

27. How long have you been in your present position?

____ months

28. Have you always worked in a principal area of practice (e.g., psychiatric nursing)?

Yes	____	1
No	____	2

29. If you are or have been working as a nurse educator or a nurse manager, do or did you consider yourself as an educator or a manager first, and a nurse second?

Yes	____	1
No	____	2
Not applicable	____	3

DEMOGRAPHIC INFORMATION

30. Year of birth. ____

31. Gender.

Female	____	1
Male	____	2

32. Marital status.

Never married	____	1
married/common law	____	2
divorced/separated	____	3
widowed	____	4

33. At what age were you first married? ____ years

If response 32 indicates married/common law, please answer questions 34-37.

34. Is your spouse/partner a member of the Canadian Forces?

Yes	____	1
No	____	2

35. If your spouse/partner is military, were you always able to be transferred together?

Yes	____	1
No	____	2

If No , please explain_____

_____

36. If your spouse/partner is non-military was he/she always able to be transferred with you?

Yes ____ 1
No ____ 2

If No, please explain_____

_____

37. Whose career is more important?

My own ____ 1
My spouse/partner's ____ 2
Equally important ____ 3

38. Do you have any children? Yes ____ 1
No ____ 2

39. **If the answer to 38 is yes**, how many children do you have?

Under 3 years of age ____ 1
3 to 5 years of age ____ 2
6 to 12 years of age ____ 3
13 to 17 years of age ____ 4
18 years of age and over ____ 5

40. Are there any features in your current family relationships (e.g. an elderly parent living with you or sick child) that affect your career?

Yes _____

No _____

If yes, please describe_____

_____

_____

41. Is your career progressing according to your expectations, achievement of goals, and direction? Please describe.

_____

_____

_____

_____

DO NOT WRITE IN THIS AREA

42. Do you think that your gender has made a difference to your career progression as a Nursing Officer in the CF?

DO NOT WRITE IN THIS AREA

Yes _____ 1
No _____ 2

Please comment _____

43. If there are any comments you would like to make about your career in the CF, or any information you think should be added, please do so.

THANK YOU FOR COMPLETING PART I OF THE QUESTIONNAIRE

DO NOT WRITE IN THIS AREA

PART II: CAREER ORIENTATION INVENTORY

INSTRUCTIONS

Think back over your career since graduating from your nursing program and joining the Canadian Forces (CF). Think about the factors which influence your decisions about the jobs you take, and the career moves you make. How you think and feel now is what is important, so respond to the questions in the present.

SECTION A: HOW IMPORTANT ARE THE FOLLOWING TO YOU?

For each of the items listed below **CIRCLE** the **NUMBER** that best describes how **IMPORTANT** that item is to you in your career decisions.

KEY: 1 = NOT IMPORTANT 2 = SOMEWHAT IMPORTANT
3 = IMPORTANT 4 = VERY IMPORTANT

	NOT IMPORTANT			VERY IMPORTANT
1. An organization which will give me long term job security is...	1	2	3	4
2. A position where I am able to set my own work hours, schedule and pace is...	1	2	3	4
3. Being able to maintain a balance between my profession and my family and friends is...	1	2	3	4
4. The challenge of organizing others is...	1	2	3	4
5. Being identified and known by my rank is...	1	2	3	4
6. To be able to develop my own nursing style is...	1	2	3	4
7. Being able to make my own decisions about the nursing care of my patients or my work is...	1	2	3	4
8. Challenging work situations are...	1	2	3	4

For each of the items listed below **CIRCLE** the **NUMBER** that best describes how **IMPORTANT** that item is to you in your career decisions.

KEY: 1 = NOT IMPORTANT 2 = SOMEWHAT IMPORTANT
3 = IMPORTANT 4 = VERY IMPORTANT

DO NOT WRITE IN THIS AREA

	NOT IMPORTANT			VERY IMPORTANT
9. The opportunity to see others change because of what I do is ...	1	2	3	4
10. Being able to use my interpersonal and helping skills in the care of my patients or working with students or with staff is...	1	2	3	4
11. To become a leader in my nursing profession is...	1	2	3	4
12. The opportunity to use my skills in developing new approaches to my practice is...	1	2	3	4
13. Working with advanced technological equipment is...	1	2	3	4
14. Being involved at the decision-making level in my profession is...	1	2	3	4
15. The prestige which results from being identified as a member of the Canadian Forces is...	1	2	3	4
16. A career which enables me to work in a variety of practice or teaching areas is...	1	2	3	4
17. Being able to work as a nurse while I raise my family is...	1	2	3	4
18. Security through benefits such as a pension plan is...	1	2	3	4
19. Being able to take time out of my nursing career to raise my family is...	1	2	3	4

DO NOT WRITE IN THIS AREA

SECTION B: HOW TRUE ARE THE FOLLOWING TO YOU?

For each of the items listed below CIRCLE the one that best describes how **TRUE** that item is to you in your career decisions.

KEY: 1 = NOT TRUE 2 = PARTIALLY TRUE
3 = TRUE 4 = VERY TRUE

	NOT TRUE			VERY TRUE
20. Rather than compromise my commitment to nursing, I would be willing to slow down my career advancement	1	2	3	4
21. I consider my nursing professionalism to be as important as my military professionalism	1	2	3	4
22. Advancement in my career has been the motivating factor in the work related moves I have made.	1	2	3	4
23. I have always seen my nursing (education or practice) career as an opportunity to help other people.	1	2	3	4
24. I prefer to work for an organization which will value my contribution.	1	2	3	4
25. Throughout my career I have been motivated by the opportunity to introduce new ideas in my work situation.	1	2	3	4
26. Throughout my career I have been motivated by a sense of adventure.	1	2	3	4

For each of the items listed below **CIRCLE** the **NUMBER** that best describes how TRUE that item is to you in your career decisions.

KEY : 1 = NOT TRUE 2 = PARTIALLY TRUE
3 = TRUE 4 = VERY TRUE

DO NOT WRITE IN THIS AREA

	NOT TRUE			VERY TRUE
27. I always wanted to become a consultant or have my own private nursing practice.	1	2	3	4
28. The opportunity to test my skills in different work settings is what I really want as a Nursing Officer.	1	2	3	4
29. I prefer to have responsibility for a group of patients or students or staff.	1	2	3	4
30. I believe that my career is as important as the career of my spouse/partner (or it would be if I had a partner/spouse).	1	2	3	4
31. The ability to move about and work in different places has been important to me in my career.	1	2	3	4
32. I like to think of myself as part of the CF.	1	2	3	4
33. I want a career in which I can be committed to improving the life of other people.	1	2	3	4
34. My career has been motivated by concern for my own sense of freedom.	1	2	3	4
35. I want to be (I am) involved in nursing education or administration.	1	2	3	4
36. I prefer to be responsible for the leadership of a particular group of staff.	1	2	3	4
37. I want the opportunity to be involved in the decisions that will affect my work.	1	2	3	4
38. I see myself as a valuable member of the nursing or teaching or managerial team in the CF.	1	2	3	4
39. I will move (I have moved) into an administrative position (head nurse, supervisor, etc.) only if (as) it gives me more opportunity to develop my clinical, or teaching, or administrative expertise.	1	2	3	4
40. I want to work in an organization where I can be assured of life-time employment.	1	2	3	4

For each of the items listed below CIRCLE the NUMBER that best describes how TRUE that item is to you in your career decisions.

DO NOT WRITE IN THIS AREA

KEY : 1 = NOT TRUE 2 = PARTIALLY TRUE
3 = TRUE 4 = VERY TRUE

	NOT TRUE			VERY TRUE
41. Helping other people attain their goals has always been more important to me than earning a high salary.	1	2	3	4
42. I would move to another geographical location to advance my career rather than stay in my area of paractice.	1	2	3	4
43. I woud prefer to work for an organization that will allow me to remain in one geographical location.	1	2	3	4
44. If I had to make a choice between my family's needs and a promotion which involves a move ALONE to another geographical area I would choose my family.	1	2	3	4
45. I believe that I am highly skilled in my area of practice.	1	2	3	4
46. Remaining in my present geographical location is more important than promotion.	1	2	3	4
47. Being with or raising my family is an important part of my career.	1	2	3	4

THANK YOU FOR COMPLETING THE QUESTIONNAIRE

PLEASE PLACE YOUR COMPLETED QUESTIONNAIRE IN THE SELF-ADDRESSED, SELF-STAMPED ENVELOPE AND RETURN IT TO ME AS SOON AS YOU CAN

CAREER ORIENTATIONS OF NURSES

This questionnaire consists of two parts:

Part I, **Career History**, is designed to collect data related to your career/work history. Please complete the details of your career since you graduated from your basic nursing education program.

Part II, **Career Orientation Inventory**, is designed to collect data on your feelings and attitudes. Think back over your career since graduating from your nursing program and joining the Canadian Forces. Examine the factors that influenced your choice(s) about the jobs you took, the specialty area and/or area of practice you chose, and any other career moves you made. Also, consider what is important to you as you plan your future career.

Please keep in mind that there are no wrong answers. Your responses should be influenced only by what you feel and believe.

Thank you for completing the questionnaire.

Your cooperation is appreciated.

APPENDIX G

LETTER of INVITATION to PARTICIPATE to the STUDY

7 March 1994

Major Micheline (MiMi) Fortin
University Liaison Office
Canadian Forces Base Edmonton
P.O. Box 10500
Edmonton, Alberta
T5J 4J5
Tel: (403) 472-1625
Fax: (403) 478-2946

Dear Fellow Nursing Officer,

Currently, I am a graduate student in the Faculty of Nursing at the University of Alberta. An essential part of my master's program is the completion of a thesis. For my thesis, I wish to study **the factors that influence the choice(s) of individuals who pursue a nursing career in a military system.**

This letter is an invitation for you to contribute and to participate in my study. Enclosed is the study's questionnaire entitled: Career Orientations of Nurses. This questionnaire consists of two parts, Career History, and Career Orientation Inventory. Please read and answer both parts, and return the completed questionnaire through the military mail system, using the addressed envelope provided. Completion of the questionnaire should take between 30 to 45 minutes. **Your consent to take part in this study will be assumed once the completed questionnaire has been received by me.**

Please answer and return the questionnaire **before 25 March 1994**. There are no right or wrong answers so please answer each question based on **what you feel is right for you**.

I promise complete anonymity and confidentiality of your responses as I am not asking you to identify yourself. Please do not make any identifying marks or write your name on any part of the answer sheet.

The only people to see the completed questionnaire will be my thesis supervisor, Dr Judith Hibberd, my research committee members (2) and myself. Military personnel will have access to grouped data responses only, no individual responses will be released to them. Completed questionnaires will be destroyed once the results have been transferred to computer disks. All computer disks will then be safely secured in a security box for seven years. The information gained from this study may be published at a later date but at no time will it be possible to identify any individual participant.

Not much is known about the factors that influence the choice(s) of individuals who pursue a nursing career in a military system. The findings of this study will provide base line data for future research of Canadian Forces' nursing personnel and could be used for development and counselling in human resource management.

There will be no direct benefits to you if you take part in this study, nor will there be any repercussions if you decide not to participate. You are not obligated to take part, but I am hoping you will choose to contribute to my study. Questions can be forwarded to me at (403) 472-1625 or to Dr. Hibberd, between 0900 and 1600 hrs MST, at (403) 492-6399.

Thank you for your time and participation. I look forward to receiving your completed questionnaire.

Sincerely,

M.M.A Fortin
Major

7 mars 1994

Major Micheline (MiMi) Fortin
University Liaison Office
Canadian Forces Base Edmonton
P.O. Box 10500
Edmonton, Alberta
T5J 4J5
Tel: (403) 472-1625 (domocile)
FAX: (403) 478-2946 (domicile)

Cher(e) collègue,

Je suis présentement étudiante au programme de Maîtrise en soins infirmiers à l'Université de l'Alberta. Afin de compléter mon programme, je dois rédiger un mémoire dont le sujet est relié à la pratique en soins infirmiers. Le sujet de mon mémoire porte sur l'étude des **facteurs qui influencent le(s) choix d'un(e) infirmier(ère) à poursuivre une carrière au sein des Forces armées canadiennes**.

Cette lettre est une invitation à participer à l'étude en complétant le questionaire intitulé "Career Orientations of Nurses". Ce questionnaire comprend deux parties Career History et Career Orientation Inventory. Veuillez lire et répondre aux deux parties et retourner le questionnaire complété dans l'enveloppe qui m'est adressée. Le temps nécessaire pour compléter le questionnaire est d'environ 30 à 45 minutes. **Votre consentement à participer à cette étude sera pris pour aquis si vous me renvoyez le questionnaire complété.**

Veuillez répondre et me renvoyer le questionnaire **avant le 25 mars 1994**. Vos réponses doivent refléter ce que vous ressentez et non ce que vous pensez être la bonne réponse.

Je promet de respecter la confidentialité et l'anonimat de tou(te)s les participant(e)s et de leurs réponses. Prière de ne **pas** écrire votre nom sur le questionnaire ou inscrire toute autre marque qui pourrait vous identifier.

Les seules personnes qui auront accès aux questionnaires complétés seront mon superviseur de mémoire, Dr Judith Hibberd, mon comité de recherche (2 personnes) et moi-même. Aucun membre des Forces armées n'aura accès aux réponses individuelles des questionnaires seulement aux réponses de groupe. Une fois que l'analyse des données sera terminée, les questionnaires seront détruits, mais les résultats seront protégés et

conservés sur disquettes, dans un coffret de sécurité, pour une période de sept ans. L'information analysée sera publiée plus tard mais il sera impossible d'identifier les participant(e)s.

Il existe une lacune dans la litérature sur les facteurs qui agissent sur le(s) choix d'un(e) infirmier(ère) à poursuivre une carrière au sein d'un système militaire. Les résultats de cette étude serviront de base à toutes recherches futures sur les infirmiers(ères) militaires et pourront aider les gestionnaires en ressources humaines.

Il n'y aura aucun avantage personnel à participer à l'étude ni de repercussion si vous décidez de ne pas répondre au questionnaire. J'espère que vous choisierez de prendre part et de contribuer au succès de mon étude. Si vous avez des questions vous pouvez enter en communication avec moi en tous temps au (403) 472-1625 ou avec mon superviseur Dr. Judith Hibberd au (403) 492-6399 entre 0900-1600 heure locale.

Je vous remercie à l'avance d'avoir pris le temps de répondre au questionnaire et d'avoir participé à l'étude. J'attends avec impatience le retour de votre questionnaire complété.

M.M.A. Fortin
Major

APPENDIX H

FOLLOW-UP LETTER

28 March 1994

Major Micheline (MiMi) Fortin
University Liaison Office
Canadian Forces Base Edmonton
P.O.Box 10500
Edmonton, Alberta
T5J 4J5
Tel: (403) 472-1625
Fax: (403) 478-2946

Dear Fellow Nursing Officer,

Two weeks ago you should have received a questionnaire entitled Career Orientations of Nurses. If you have not already done so, would you be kind enough to complete the questionnaire and return it to me in the addressed envelope that was provided. Your input is very important to assure the success of my study. Your answers and comments can be written in either english or french.

If you have already completed the questionnaire and returned it, I would like to thank you for taking the time to assist me in my study.

M. M. A. Fortin
Major

28 mars 1994

Major Micheline (MiMi) Fortin
University Liaison Office
Canadian Forces Base Edmonton
P.O.Box 10500
Edmonton, Alberta
T5J 4J5
Tel: (403) 472-1625
Fax: (403) 478-2946

Cher(e) collègue,

Depuis deux semaines vous devriez être en possession d'un questionnaire intitulé "Career Orientations of Nurses". Si vous n'avez pu répondre au questionnaire je vous encourage à le completer sans délais car vos réponses sont importantes pour assurer le succés de mon étude. Veillez retourner le questionnaire dans l'enveloppe qui m'est adressée. Vos réponses et commentaires peuvent être écrits en français ou en anglais. Si vous avez déjà complété et retourné le questionnaire, je vous remercie d'avoir pris le temps d'y répondre et d'avoir participer à l'étude.

M. M. A. Fortin
Major

APPENDIX I

LETTER FROM DR. M. MCLEES

UNIVERSITY OF CENTRAL QUEENSLAND

Rockhampton Campus
Rockhampton
Queensland
Australia 4702
Tel (079) 30 9777
Fax (079) 36 1361

Faculty of Health Science
Phone (079) 309 706 Fax (079) 309 871

13 October 1993

Major Mimi Fortin
14708-97A Street
Edmonton, Alberta
Canada

Dear Major Fortin,

In response to your request, permission is granted for you to use:

- the questionnaire 'Career History and the Career Determinant Inventory (CDI)'
- figure 2.1 'The Development of Career Orientation'
- figure 3.1 'Relationship of Research Variables'
- portions of data as appropriate

from my doctoral dissertation "Career Patterns and Orientations of Nurses" for your Masters study.

You may make adjustments to the questionnaire wording to make it applicable to the military context.

All the best with your research. I look forward to the outcome.

Yours sincerely,

Dr Mary Ann McLees
Associate Dean

Bundaberg Campus
PO Box 1724
Bundaberg
Queensland 4670
Tel (071) 53 1959
Fax (071) 53 1435

Emerald Campus
PO Box 197
Emerald
Queensland 4720
Tel (079) 82 2956
Fax (079) 82 2750

Gladstone Campus
PO Box 1319
Gladstone
Queensland 4680
Tel (079) 72 5724
Fax (079) 72 6232

Mackay Campus
PO Box 5666
Mackay Mail Centre
Queensland 4741
Tel (079) 40 7527
Fax (079) 40 7607

APPENDIX J

LETTER FROM MILITARY SUPERVISOR

National Defence | Défense nationale

National Defence Headquarters
Ottawa, Canada
K1A 0K2

Quartier général de la Défense nationale
Ottawa, Canada
K1A 0K2

4827-MOC 57 (DHCPTD)

12 January 1994

Major M. Fortin
14708-97A Street
Edmonton, AB
T5E 4E4

AUTHORIZATION TO CONDUCT PSYCHOMETRIC SURVEY
ON NURSING OFFICERS

References: A. F24 813 265 (Pers) 15 December 1993
B. Conv Col Gagné/LCol Ludorf, 5 January 1994
C. Telecon Col Gagné/Maj Fortin, 7 January 1994
D. Telecon DHCPTD/PCO 8, 11 January 1994
E. Telecon Col Gagné/LCol Ludorf 12 January 1994
F. CFSO 27/92

1. The object of the correspondence received under cover of reference A was discussed with NDMC (reference B) and a copy of this research proposal was given to LCol Ludorf for her perusal.

2. The following are in response to your letter at reference A:

a. there are no objections to your conducting a psychometric survey on Nursing Officers;

b. the Commandant of NDMC and the Chief of Nursing Services concur with you conducting a pilot test as per your research proposal. The suggested dates for your visit to NDMC are also acceptable (references B and E); and

c. a mailing list of the work place addresses of the current CF Nursing Officers will be made available to you whenever needed (reference D).

3. As the sponsor for your PG program, I am responsible to assist you in some of the expenses related to your research work (reference F). In order to facilitate

your travel plans, please use the following Financial Code: 2298AK 09MM 02106. As discussed earlier, it is important that costs be kept at minimum and service air be used as your mode of travel. Costs must be reported to DHCPTD within two weeks of completion of the trip. Should there be a change of plans or unexpected costs, please contact the undersigned at the earliest opportunity.

M.S. Gagné
Colonel
Director Health Care Personnel
Training and Development
for Chief of Defence Staff